



Can the Music Industry Adapt to The Digital Future?

BY ROSS LAWRENCE

The music industry is going through a shakeup. Revenue from music sales has declined from more than \$14.6 billion in 1999 to \$6.3 billion a decade later. Conventional wisdom holds that the rise of the Internet's popularity is at the heart of this phenomenon — and the evidence mostly indicates that this view is correct. Online stores like iTunes, along with an abundance of file-sharing and user-driven sites like YouTube, have changed the rules for marketing, selling, and distributing music.

To be sure, there are factors that complicate this narrative. The 1990s likely saw a significant one-time boost in music sales as customers replaced vinyl records and cassette tapes with CDs. Moreover, two recessions during the 2000s certainly did not help the industry. Still, it is likely that technology, above all else, transformed the music business. Record companies must adapt quickly or further risk becoming dinosaurs in an ever-changing commercial landscape.

Technological Drivers: How We Got Here

The industry has seen no shortage of changes in music media during the past half-century or so. Following several decades during which vinyl records were king, cassette tapes began to gain footing in the popular music market during the early 1970s. As technology improved and sound quality became better on these tapes, sales boomed; by 1977, cassettes overtook vinyl records as the most popular medium for music sales. Sony released its portable Walkman in 1979, allowing for music tapes to be transported easily by joggers and others who wished to listen to tunes on the go.

By the late 1970s, researchers at Sony and Phillips, among other companies, were at work on a new digital medium. The two companies released the first CD players and discs commercially in the United States on March 2,

1983, a day sometimes referred to as the “Big Bang” that set off a new era of digital music. At first, CDs mostly found a niche market among classical music aficionados, who appreciated the high audio quality of the recordings. As the cost of players began to decline, however, CDs began to attract more buyers interested in popular music. Dire Straits’ album “Brothers in Arms,” released in 1985, became the first CD to sell 1 million copies. CD sales eclipsed those of vinyl records in 1988 and eventually overtook sales of cassette tapes in 1992.

The 1990s were the heyday of CDs, as they sat safely atop the pecking order of music media. At the high point of CD sales in 2000, according to Nielsen Soundscan, consumers bought more than 943 million. But the picture became much less rosy for the record labels as the decade following 2000 progressed. Within eight years of that peak, CD sales would plummet 54.6 percent — or about 514.6 million fewer units sold per year.

The trend is clear: For the past decade, revenue from CDs has dropped precipitously, coinciding relatively neatly with the rise of the Internet as a primary vehicle for exchanging information, including music files. Other advances in technology accompanied this occurrence. In November 1996, a U.S. patent for the MP3 audio file format was issued, and about three years later, portable MP3 players began appearing on the market. (MP3 is short for MPEG-1 Audio Layer 3; MPEG, in turn, is short for Moving Picture Experts Group, a body that sets voluntary international standards for audio and video files.)

Napster, an online community intended for sharing MP3 files free of charge, went online in June 1999 and was operational until 2001. The company’s success sparked one of the earliest waves of mass copyright suits, with legal challenges coming from both major record labels and artists like Metallica and Dr. Dre. Napster peaked with about 26.4 million unique verified users. Even as litigation eroded the site’s popularity and eventually shut down the service, alternative file-sharing programs began attracting former Napster users. As early as July 2001, the writing may have been on the wall. “The grim reality is that Napster’s audience is beginning to be fragmented across many services, which will be very difficult, if not impossible, to litigate against in the same way,” says Mark Mooradian, vice president and senior analyst at Jupiter Media Metrix.

As illegal file sharing began to draw the ire of musicians and record companies, legal downloads became a growing business, as well. Apple Inc. introduced its iPod music player in 2001, the dominant offering to this day; it added its iTunes online music store in 2003. According to the NPD Group, a market research firm, the number of Internet users paying for downloads totaled 36 million in 2009, with online downloads accounting for 33 percent of music tracks purchased in the United States that year. Digital sales rose between 2007 and 2009 despite the recession.

What Changed and Where the Road Is Going

Many economists believe that record companies and musicians generally are correct in suggesting that illegal file sharing has significantly affected CD sales as well as overall revenues. “The Internet was going to change the business model and might have led to a shakeup of the labels, but by itself it would not have lowered the payments going to artists or overall industry profitability,” says Stan Liebowitz of the University of Texas at Dallas. “The movement to legal downloads should have made the industry more profitable, not less, since it lowers cost and enhances the product.” A colleague of Liebowitz’s at the University of Texas at Dallas, Alejandro Zentner, estimates in a 2006 study that usage of file-sharing sites reduced a consumer’s probability of buying music by an average of 30 percent. And a 2004 study by Rafael Rob and Joel Waldfogel of the University of Pennsylvania, who collected data from a sample of Penn undergraduates, indicates that downloading reduced per-capita expenditures on hit albums; the researchers conclude that downloading could have caused about a 20 percent reduction in music sales from 1999 to 2003.

One paper that has garnered much attention contradicts this view, however. In a 2007 study Felix Oberholzer-Gee of Harvard Business School and Koleman Strumpf of the University of Kansas argue that file sharing has had no statistically significant effect on legal sales of music. They speculate that a shift in spending toward other forms of entertainment can largely explain the decline in music sales.

While the extent to which illegal downloads are affecting revenues, the digital trend is almost certainly affecting the marketplace in another way: Consumers no longer need to buy an entire album when they want only one or two of its songs. George Mason University economist Tyler Cowen notes that iTunes and other digital media thus allow listeners to limit their purchases better in accordance with their tastes. “Web listening means you don’t end up buying music you don’t like,” he says.

But the news may not be all bad for artists and music labels. Benjamin Shiller, a doctoral candidate in applied economics at the University of Pennsylvania, says there may be opportunities for companies to profit from the Web. “My research indicates the Internet is a good thing for revenue in some ways,” Shiller says. “Recommender

systems, like iTunes Genius, can help improve sales and allow smaller artists to gain exposure,” he says. Artists can also promote their work on social network sites such as Facebook.

Given the varying challenges confronting an industry in flux, what can artists and record labels do to keep up? Some performers like Radiohead and Wilco have gotten creative, choosing to release content online free of charge or with the stipulation that listeners pay whatever price they think is appropriate. Another option is greater emphasis on live performance, a market that digital distribution seems unlikely to displace.

New channels also may emerge in unexpected places. For example, Activision Blizzard, publisher of the *Guitar Hero* line of music videogames, and Harmonix Music Systems, publisher of the competing *Rock Band* games, has opened online stores where players can buy music for their games.

Steve Meyer, a former executive with Capitol and MCA Records, says the most important thing going forward is for record companies to embrace the world of digital media and look to the future. “Labels need to accept the world we’re living in — people are downloading, and there’s no way to turn back the clock or stop the pace of technology.” In addition to searching for new online models, Meyer recommends that firms and artists recognize that putting music on iTunes at least guarantees some revenue. This point was reaffirmed by Electric and Musical Industries’ recent decision to release the Beatles catalog to iTunes. Prior to November 2010, the catalog was not available legally for online downloading; this release was a symbolic step in the transition to digital media.

Cowen offered a similar assessment to Meyer, pointing out that copyright litigation by music labels will not alter the fundamental trends in the industry. Ultimately, both firms and customers may need to adapt to a landscape for popular music that will never resemble the one that existed 10, 20, or 30 years ago. “Mostly we’re in a world of paid downloads, and it means drastically lower revenue for music companies ... [which will] continue with a generational changing of the guard,” Cowen says. “Right now plenty of 56-year-olds still buy ‘Paul Simon’s Greatest Hits’ and so on. That will change. We’ll get a lot more low-tech music done for the love of it; the days of Led Zeppelin hiring a massive orchestra are over.” **RF**

READINGS

Connolly, Marie, and Alan B. Krueger. “Rockonomics: The Economics of Popular Music,” National Bureau of Economic Research Working Paper no. 11282, April 2005.

Liebowitz, Stan J. “Economists Examine File Sharing and Music Sales.” In Gerhard Illing and Martin Peitz, (eds.), *Industrial Organization and the Digital Economy*. Cambridge, Mass: MIT Press, 2006, pp. 145-174.

Oberholzer-Gee, Felix, and Koleman Strumpf. “The Effect of File Sharing on Record Sales: An Empirical Analysis.” *Journal of Political Economy* February 2007, vol. 115, no. 1, pp. 1-42.

Rob, Rafael, and Joel Waldfogel. “Piracy On The High C’s: Music Downloading, Sales Displacement, and Social Welfare In a Sample of College Students.” *Journal of Law and Economics*, April 2006, vol. 49, no. 1, pp. 29-62.