

Evaluating the impact of the internet on barriers to entry in the music industry

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Abstract

Purpose – Music can be copied and distributed almost without cost via the internet, while payment and distribution technologies are reducing the transaction costs of its commercial exchange. In the case of MP3 the cost of swapping music files is negligible, for both the supplier uploading the file and the receiver who is downloading the music. In light of these developments, this paper seeks to put forward the proposition that the main barrier to entry in the music sector has been the ownership and protection of artistic content in the supply chain.

Design/methodology/approach – The paper focuses on a review of the concepts relating to “barriers to entry”, since entry into the music industry is central to the explanation of the incumbents’ strategic responses. The pre- and post-web supply chains are also assessed from a “barrier to entry” perspective.

Findings – This paper argues that the internet is destabilising the supply chain for music by challenging the pre-web role and domination of the music industry supply chain; and by changing the primary entry barrier in the sector from the incumbents exploiting their ownership of copyright to one of trying to protect it.

Originality/value – The paper contributes to understanding the strategic responses of music industry incumbents, as well as presenting some of the implications for consumer welfare.

Keywords Supply chain management, Music, Copyright law

Paper type Viewpoint

Introduction

Copyright lies at the heart of the recorded music industry (MMC, 1994). Copyright secures ownership of an original work of music to the author (e.g. composer and lyricist). It is important to ensure the talents of successful artists and songwriters are rewarded. It is crucial both to the creative side of the music industry and the commercial activity of the record companies.

In contractual transactions, typically the rights are assigned to market intermediaries (e.g. publishers, international record labels). Contractual terms reflect the bargaining power of players in an oligopolistically structured industry. The intellectual property rights (IPR) to the works and records, which account for 80 per cent of global music sales, are currently appropriated by only five companies: EMI (UK), Bertelsmann (Germany), Warner (US), Sony (Japan) and Universal (France). Warner’s planned merger with EMI was called off in October 2000, following an intervention by the

European Commission. Sony has merged its non-Japanese music business with Bertelsmann Music Group (BMG), although the deal has not yet cleared all regulatory hurdles. Time Warner sold Warner Music in March 2004 to a private equity group, which included Edgar Bronfman.

It is our position that the main barriers to entry in the music industry, come in the form of “exclusive” rights and royalty deals, which have given the major record companies “exclusive” access to markets, only so long as those rights can be enforced by law and while the market lasts. The internet is threatening that copyright protection and therefore the power of the major record companies to exploit their major financial stream. Entry into the music market is central to our analysis so there follows in the next section an overview of the evolution of the theory to date. The major objective will be to try and pick out those different strands of theory particularly appropriate to analysing the music industry context. It is also important to note that the research has been grounded in empirical work in a physical setting and there is a real dearth of material on the digital context.

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Barriers to entry – conceptual approaches

Traditional definitions

The distinctive features of new entry into an industry are that both a new legal entity is established in that industry and new productive capacity is set up. Bain (1956, 1958) proposed a “limit price” theory [1], which was later eloquently elaborated by Modigliani (1958), into an essentially refurbished theory,

of potential competition. Rather than set a price of P_m the firm will choose to operate at the limit price level (P_c) in Figure 1, where it is anticipated that the costs of preventing entry – whether being incurred from charging such a price or from erecting the entry barriers – will be outweighed, by the profits resulting from the absence of entry. This leads naturally to his definition of the height of entry barriers (or the conditions of entry, as he terms it):

That advantage of established sellers in an industry over potential entrants these advantages being reflected in the extent to which established sellers can persistently raise the prices above a competitive level without attracting new firms to enter the industry (Bain, 1956, p. 3).

A number of limitations have been identified with the “limit price” approach. Stigler (1968, p. 110)[2] presents a much more extensive critique of it than we wish to go into here, but basically he argues that in spite of Bain’s critical assertion that there is a lack of previous empirical evidence on earlier studies of potential competition, he does not indeed himself present much, to support his theory. There was also an implicit assumption, made by Bain, that it was more profitable to exclude all entrants than it was to retard their rate of entry.

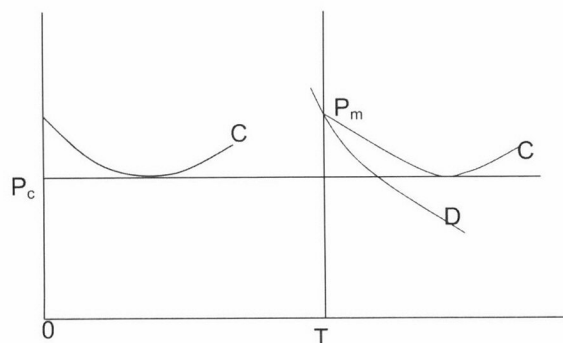
Stigler (1968, p. 119) counter proposed that when an industry has had substantial profits, in excess of the competitive level and, for a substantial period of time it could be assumed that potential entrants would seek to become much more than potential and, actually go ahead and enter it. In effect, he was using the magnitude and duration of monopoly profits as the main (inverse) measure of the number of potential entrants. More poignantly Stigler explained that unless this measure can be replaced by another, potential competition has no explanatory value in dealing with either monopoly price or monopoly profit.

Stigler has attempted a more direct definition of what constitutes an entry barrier:

A barrier to entry is a cost of producing (at some or every rate of output) which must be borne by a firm, which seeks to enter an industry but is not borne by firms already in the industry (Stigler, 1968, p. 67).

Two features of this definition immediately stand out: first, it rules out anything that does not raise the potential entrant’s cost curve above that of the incumbents and second, it is designed to answer a different question: “on what does firm size depend – economies of scale, barriers to entry, or something else?” (Stigler, 1968, p. 67). His answer is that “demand and cost (economies of scale) conditions govern the

Figure 1 The “limit price” to exclude entry



Source: Bain (1956, p. 3)

size of firms”. That barriers to entry would then be restricted to differentially higher costs of new firms, which act as one force – others are location and advertising and product characteristics – which affect the demands of individual firms (Stigler, 1968, p. 69).

Stigler is thus concerned with firm size, and consequently, his semantics require that economies of scale cannot be counted as an entry barrier, for if he included them as such, then it would be double counting. Behind the intrinsic interest economists have in business behaviour and its determinants, there lies a deeper concern about the ability of market economies to provide the best allocation of resources. From the point-of-view of social welfare it would be quite untrue to state that entry barriers always lead to inefficiencies greater than any other feasible outcome. A classic example is given by the Schumpeterian mechanism for technical progress whereby the lure of monopoly profits is necessary for the initial development of the product. Without the protection of some form of entry barrier (for example, a patent), there would be no incentive to invent.

Such trade-offs between the positive externalities generated by some restraint (e.g. invention generated by patents) and monopolistic distortions (e.g. consequent output restriction) may be quite common. Stigler’s welfare-based definition of entry barriers naturally follows:

... those socially undesirable limitations of entry, which can be attributable to the protection of resource owners already in the industry (Von Weizsacker, 1980, p. 400).

Demsetz develops a related argument based on the appropriate allocation of property rights:

... the problem of defining ownership is precisely that of creating properly scaled legal barrier to entry (Demsetz, 1982, p. 49).

The policy option for Demsetz is whether the evolving legal system has drawn the line in the right place.

Conceptual applicability to the music market

There is a problem of trying to relate the traditional and recently revised entry theory with the music market, and we think that this stems from three important characteristics in the original economic theory:

- (1) The theories are based on comparative statistics and therefore assume some level of stability over time.
- (2) Following on from this they make certain assumptions about the nature of the participants in a marketplace.
- (3) Like all theories in which elements of notation (a, b, etc.) represent actors they work at the level of their own assumptions and the logical consequences of those assumptions – they are bound to since this can be thought thorough and corrected – but their application to the empirical world is less clear and much more disputable.

The idea of barriers to entry must imply that there is some market into which other players than existing suppliers might enter by offering identical goods or services to identical customers. The only way that this might be prevented from happening is that entry might require sunk fixed costs or contractual costs or some other non-temporary cost. This would assume that the market is stable, that the technology of production is more or less stable and that the contractual requirement for distribution etc. are more or less stable. This

may have been true for the music industry during the latter half of the nineteenth century and for most of the twentieth century for three reasons:

- (1) Firms tended to be formed in order to produce one good or type of good or service. Parlophone and Decca were there to produce records and distribute them, or EMI produced both records and radiograms (Thorn).
- (2) The production and distribution technology and the markets for the output tended to be stable over time. This implied that sunk fixed costs were expected to deliver a return on the investment outlay over a long period of time. The shellac 78s were the normal form of recorded music from the 1920s until the 1950s, and vinyl lasted into the early 1990s.
- (3) The promotion of, and investment in, bands during the 1960s and 1970s was more strategic and longer term compared to the dominance of one-hit wonders since the early 1990s.

It is apparent that neither of these two sets of conditions now applies. The rapid rate of change in production technology means obsolescence constantly overtakes firms and that any reliance on "sweating" old assets while holding onto the ability to exclude other firms from the marketplace would simply fall by the wayside. This changing technology has meant that firms in the music market can produce different product formats (CDs, singles, LPs, cassettes, MiniDisc, MP3, DVD).

Where then, is the entrance barrier to the music market? The most plausible arguments point to:

- The complex, capital-intensive logistics of an international distribution network that must cope with sudden changes in demand (independents often trade their international intellectual property rights against international distribution (Kretschmer *et al.*, 1999).
- The huge marketing costs involved in "pressing music into the market" in which six figure dollar sums are spent on chart-bound albums in the major national markets, such as the UK or Germany.
- The nature of risk in a winner-take-all market where 10 per cent of products account for 90 per cent of turnover, and nobody knows the reasons for success (Caves, 2000).
- The convergence of the consumer electronics, media, entertainment and telecommunications industries using digital and network enabling technologies is producing global players with global reach (e.g. Time Warner, Disney, Sony, Bertelsmann, Viacom, News Corporation, Vivendi-Universal).

It is our premise that it is most probably strong intellectual property rights that have facilitated concentration processes in the music market. The long-term of copyright (author's life plus 70 years in the US and Europe) and neighbouring rights (50 years from first release/broadcast of sound recording) generates an automatic income stream from the "back catalogue". This allows a hedging of risk in a way unavailable to new entrants focusing on the promotion of new material.

Moreover, the issues of sunk costs and contestability do have clear applicability to the digital music situation. The internet does have the potential to lower the level of investment to manufacture and distribute music and it also leads to more contestability because of its ability to provide global demand and supply. In the next section we will focus

on the supply side of the music industry and consider the pre-web model to that potentially offered by the internet.

The pre-web supply chain for music

In the pre-web supply chain there are various actors whose roles will be explained in turn. The artists are the content providers, contracted by record companies to record material that is either their own or provided for them by writers (refer to Figure 2). The power and control of the supply chain is very much in the hands of the record company who have ownership of the major item of value in the chain, which are exclusive rights to the artist's content (see Hardaker and Graham, 2001, p. 133). The record companies are in control of much of the distribution and also supplier selection. This is very much based on their perceived quality of the music, past reputation and the contract fee (price). In return the artist is provided with promotion, merchandising and the distribution of their content in a commodity format (e.g. CD).

All the major record companies operate their own distribution businesses and so a retailer who orders direct from distributors will have to order stocks from several sources (majors and up to 20 others from the independent sector). Wholesalers generally handle the releases of all the record companies and so a retailer will only have to order from one wholesaler if it uses this route. The main wholesalers also offer another service known as "rack jobbing". This is a method of supply used by non-traditional retail outlets (such as petrol stations and supermarkets). A "rack jobber" supplies a complete package of records and display material and is responsible for maintaining the stock, typically on a sale or exchange basis.

The exploitation of rights in sound recordings

In this chain it is the content produced by the artist (in its commodity form – the CD), which is the primary value driver in the chain. All other activities are supporting activities (e.g. marketing, distribution) by the record company to try and exploit their revenues from owning this content. Basically, their supply chain activities are designed to exploit value creation[3] from the content.

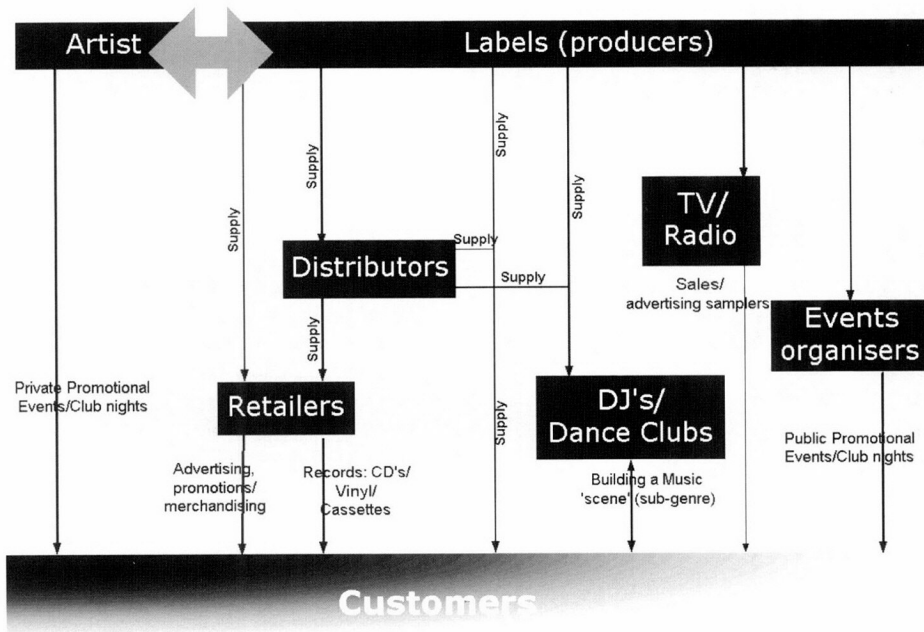
For instance a record company in the UK, will own the copyright in a sound recording by virtue of sections 9 and 11 of the 1988 Copyright Act if it has undertaken the arrangements necessary for the making of that recording; and this is usually the case. Sales of such recordings in the UK generate revenue for the record company. This revenue derives from the sales of records to UK customers (e.g. wholesalers, rack jobbers, retailers and record clubs); licensing of the sound recordings rights to other UK record companies (e.g. for use in compilation albums); and from income collected on the public performance of recordings (e.g. from television and radio broadcasters).

A schematic diagram showing the principal routes through which returns flow from record sales in the UK and abroad to the owners of property rights is given in Figure 3. The record company for its part makes the following payments:

Advances (e.g. advance payment of royalties) and royalties (e.g. on sales) are paid to the recording artist in accordance with the terms of the recording contract.

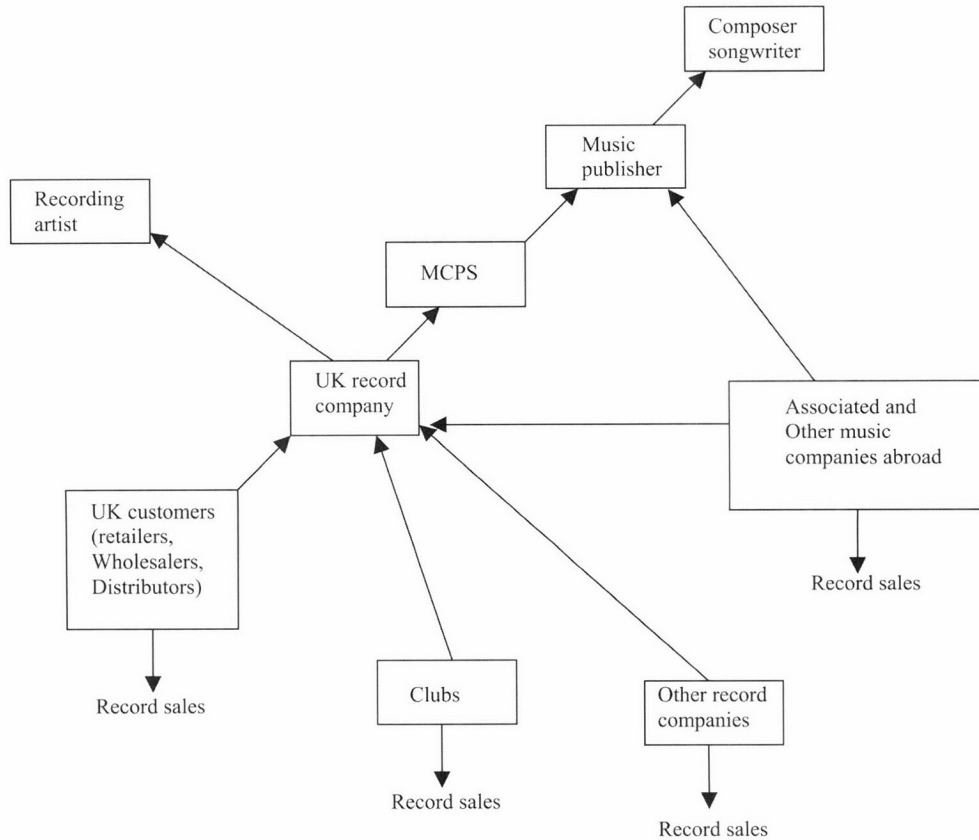
Royalties of 8.5 per cent of the published dealer price in the UK according to the MCPS[4] (mechanical copyright

Figure 2 The traditional supply chain for music



Source: Parikh (1999, p. 7)

Figure 3 Income flows from record sales to property right owners



Source: MMC (1994, p. 59) based on figure supplied by Sony



protection society), which in turn passes this to the owner of the copyright in the musical work in the recording.

The record companies are faced with the dilemma of; on the one hand being accused of exploiting artists and taking the lion's share of the profits from their work, and on the other hand having to bear the main financial risks for the 90 per cent of artists who are not successful (Alderman, 2001; Caves, 2000).

The post-web supply of music

The music industry has been under threat due to widespread piracy of CDs, private CD burning and the online (peer-to-peer) swapping of music files. By far the biggest of these threats to be faced by the record companies is that of internet-enabled peer-to-peer supply (P2P) networks for music exchange. P2P bypasses the record labels because it allows consumers to swap music files between themselves without any money flowing to the record labels. Indeed, artists can also supply their music independent of the control of the record companies.

The advent of MP3 and online file sharing made it much easier to supply music over the internet directly to consumers' own PCs. Not surprisingly, this was quickly followed by a proliferation of portable audio devices, which allowed MP3 files to then be downloaded from PCs, and carried around by the user. Portable audio devices are smaller than CD players, use no moving parts and so are ideal portable devices for listening to music whilst moving around or taking exercise. In turn, this led to a rapid increase in demand for music, which could be downloaded, via the internet, onto PCs.

As Figure 4 shows, the internet is now playing a big role in the supply of music. By itself, so long as consumers download and pay for copyrighted musical content through legitimate online trading organisations, this would not be a problem for the record companies. Indeed, the internet offers enormous

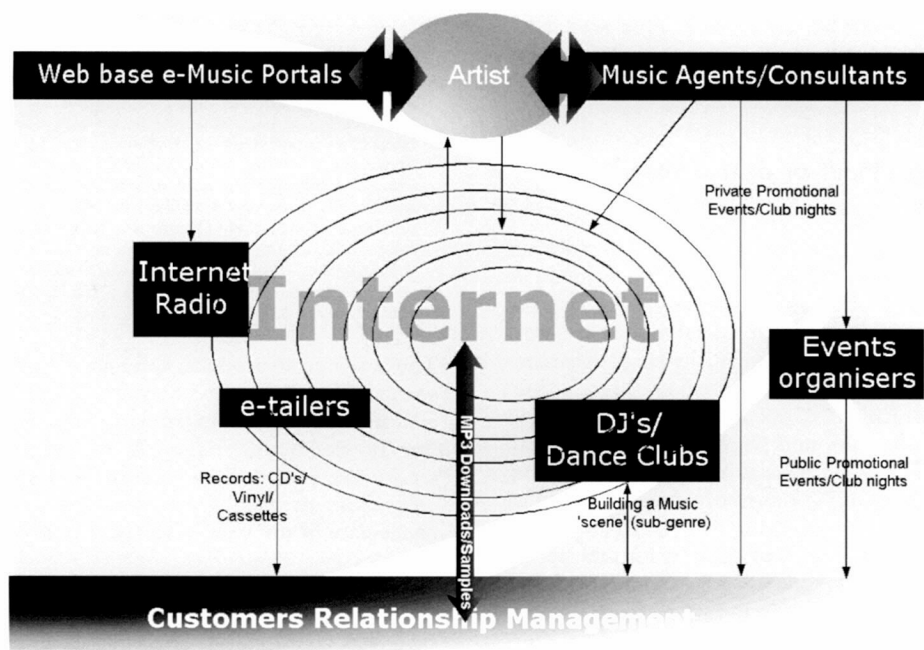
scope to the music industry as the new emerging digital technologies brings music to a wider public, affords niche artists access to their audiences, and distributes old, new and unusual music at affordable prices.

Unfortunately, the internet also offers enormous scope to music pirates. Music piracy is not new. However, according to Hammersley (2002), what really scares the music industry is the sheer scale and ease of the piracy allowed by the internet. The technology is now such that, in theory and increasingly in practice, it is possible to download (e.g. pirate) any piece of music without paying for the privilege of doing so. The most famous promoter of such a technology, to date has been the American company Napster. In effect the primary barrier that the record company have used to control and dominate the music industry – owning content – offered little resistance to these new technologies. They soon realised that they had clearly underestimated the impact of the internet and had been very sluggish to react to this unprecedented threat. To prevent entry – largely illegal – needed them to be vociferous in the pursuit of protecting copyright.

Response of the incumbents

Not surprisingly, this has brought a two-fold policy response from the music industry. Firstly, in an attempt to stop Napster and similar organisations from facilitating music swapping, it has taken them to court for copyright infringement (Greenberg and Erios, 2001). Though the courts have compelled Napster to end its role in facilitating the illegal swapping of music files and to establish a subscription-based service of its own. However, this has not diminished the growth in music piracy. It is estimated that, through the successors (e.g. Morpheus, Kazaa) to Napster, peer-to-peer music file swapping is running at the rate of 2 billion files per month (Hammersley, 2002). Unlike Napster they do not have a central website server, but they can move around remotely

Figure 4 The increasing dominance of the internet



based moving from one computer to another which makes detection very problematic.

The second form of response by the industry has been for the big labels to set up their own on-line subscription services for music. BMG and Universal already sell CDs and other merchandise from their joint venture website, Getmusic.com and they plan to launch Getmusic sites in the UK, France, Germany and The Netherlands (Magex, 2001). In addition to its deal with Musicmaker, EMI recently launched emidigital.com, a business-to-business (B2B) website allowing EMI to distribute digital assets to retailers and media partners, and serve foundations for future digital commerce initiatives in the business to consumer market.

However, this itself is not without perils. For example, it could even aid piracy by making it easier to obtain the “first” copy of a music file, which can then be passed on to anyone. The real value in the chain is no longer been able to own content but rather to protect your content. Once content is adequately protected then there is a major barrier to entry against new digitally based P2P entrants. But running counter to this is the apparent speed of which technological developments are occurring such that no sooner have detection technologies been developed than new one’s are emerging for piracy to continue on.

The secure digital music initiative (SDMI) forum was set up in 1998 by record companies, technology start-ups (developing copyright protection and management technologies), consumer electronics companies and PC manufacturers with the brief to “protect copyrighted music in all existing and emerging digital formats and through all delivery channels” (www.sdmi.org).

The intention was to create a closed music distribution system, such that SDMI compatible players are unable to play MP3 files. Protected music will be digitally “watermarked”; SDMI compliant players then automatically limit when and how the consumer is allowed to play the music, e.g. track downloads and allow no more than four copies. They have encountered some problems with the watermarking technology being broken and since compliance is voluntary, non-compliant players are being found on the market.

In the next section the focus of the paper is to evaluate the extent to which the internet is beneficial or detrimental to consumer welfare.

Is the internet beneficial or detrimental to consumer welfare?

What Napster really does is index and manage distributed data resources. Napster was (is) essentially an index site. The company compiles a list of Napster software users and the songs they possess and makes that list available to other users when they install the Napster software. A user simply searches for the music they want and then downloads it directly from the computer on which it is located. The search and download are free to the user, and Napster does not have to touch the file. Napster treated music as a “gift” and according to its creator Shawn Fanning[5] was not created for financial or profit making purposes.

According to Magex (2001), Napster users could access between 500,000 and 800,000 individual tracks of music. It is easy to see what scares the music industry; in theory, if one person buys a recording and places it on their hard drive, they can then make it available, free of charge, to everyone else in

the world. This means that there is virtually no way to guarantee that record companies, artists, and the distribution chains get paid for the music. But Napster did not get paid either. This meant that it had little means of generating revenue. Magex estimated that in the US, approximately 16 per cent of the record industry business would be lost to piracy in the year 2000.

There are a number of reasons to believe that retail e-commerce will overall increase social welfare. It will benefit consumers by helping them enjoy lower prices and more choices. The savings on search costs for buyers and sellers are likely to be substantial. In markets with differentiated consumer tastes, lowering search costs can reduce “fit” costs resulting from consumers making suboptimal product choices (Bakos, 1997). Also, increasing the number of product offerings can result in a first-order increase in welfare (Hotelling, 1929). This result should hold especially true when the additional customisation or versioning can be provided at very low or zero marginal costs. Even price discrimination can increase social welfare by increasing the number of purchasing consumers, and thus reducing supply surplus loss. Similarly, bundling large numbers of information goods may increase total welfare by reducing deadweight loss (Bakos and Brynjolfsson, 2000).

The increased efficiency is likely to provide enough social gains for both consumers and producers to benefit, but the question of who benefits by how much remains to be worked out. Some consumers may pay lower prices. Others may not pay lower prices, but still benefit in convenience or breadth of selection. Still other consumers will see some of their surplus captured by retailers through price discrimination. These patterns will surely vary across time: in the short run, benefits may be captured by the sellers who are early movers on retail e-commerce, but after a time, those benefits are likely to be eroded by competition, economic researchers, businesspeople and consumers all have a deep interest in how these forces will work themselves out.

A recent phenomena worth noting is the use of royalties as securitisation assets. Investment banker David Pullman, who invented intellectual property securitisation with the Bowie Bonds, said:

Historically, the entertainment and intellectual property owners could only get substantial cash from their asset’s value by selling, while only minimal opportunities to borrow against future cash flow existed before. Typically intellectual property owners find their most valued assets are illiquid and undervalued. Due to the limited options of short term, low leverage bank loans and the onerous terms of venture capital, major corporations have traditionally acted as the bankers to their respective intellectual property industries. However, an advance from a record company, for example, is a fully taxable event offered with high rates of return and significant loss of control or even ownership. The size of the market cap of intellectual property and entertainment assets is probably a trillion dollars (quoted in Kretschmer *et al.*, 2001, p. 437).

These financial products tend to be with established artists such as Elton John, Rod Stewart, and the Rolling Stones with a clear projected royalty stream. Table I gives more details on the Bowie Bonds issue. A big challenge for widening securitisation is that co-ownership of rights is typical in the entertainment field, and all owners must be willing to participate in the issue (Fairfax, 1999).

Conclusion

As recent events in the US and UK courts have demonstrated, the music industry is now reacting to the threat posed by the

Table I The securitisation of the Bowie Bonds

The Bowie Bonds (1997)

Underwriter	Pullman Group at US investment bank Fahnstock
Issue	\$55 million
Assets	Rights to David Bowie's master tapes and publishing catalogue transferred into a vehicle company (Bowie's 25 records sell 1 million units/year)
Yield	7.9 per cent (10 to 15 points above average corporate credits in 1997)
Average maturity	Ten years
Credit rating	AAA (moody)
Purpose	Higher advance than possible from new distribution deal with record company; enabled Bowie to buy back publishing rights in some songs owned by a former manager and invest in internet companies
Buyer	Prudential Insurance Co. of America (institutional investor)

Source: Kretschmer *et al.* (2001)

internet and digital media. Whilst music has existed in an on-line digital form for many years, it is only recently that the music industry has perceived it as a significant adversary. The combination of an effective and unsecured compression algorithm (MP3), the increasing availability of broadband internet connections, and the re-emergence of peer-to-peer networking have brought about a change in attitude.

In the pre-web supply model the major record companies controlled the sector purely by owning and then exploiting the major source of value creation – artistic content. The record company's attempt to broadcast, exchange or copy artist's material has been either to attempt to control the development of the technology involved, or to apply the law to ensure that it receives the monetary compensation. However, given the lack of control of any one firm or nation over the event and the activities on the web, copyright and piracy issues are likely to be unresolved in the medium term.

The extent to which the major record companies can continue to retain their dominant position in the supply of music will largely reflect the extent to which they can enforce copyright protection. This is a major break from the pre-web model because it is now a much more complex and difficult issue of the ability of the major record company's attempts to successfully enforce protection rather than purely having ownership, which is going to be major determinant of their future business success. In effect, this is the primary entry barrier that they have to prevent the fragmentation of the industry, by what is now seen in the industry as a significant adversary. As a consequence, there is growing pressure on the music industry to develop a new business model or suffer the consequences.

The current ongoing legal battles may not in themselves resolve any of the above entry-related issues in the supply of music. What they have done is attracted a great deal of attention towards the issue of digital music, how it should be made available to the public, and at what price. The major question that all this poses however is how the music industry will change in response to this.

Notes

- 1 Bain began his classic 1956 volume *Barriers to New Competition* with the profound observation (p. 5) that "... most analyses of how businesses competition works and what makes it work have given little emphasis to the force of potential and threatened competition of possible

new competitors, placing disproportionate emphasis on competition among firms already established in any industry; [and] that so far as economists have recognised the possible importance of [the former] they have no very good idea of how important it actually is."

- 2 Stigler defines a barrier to entry as "a cost of producing (at some or every rate of output) which borne by a firm which seeks to enter an industry but is not borne by firms already in the industry (1968, p. 67).
- 3 Porter (1985) presents a comprehensive account of how firms go about managing internal and external organisational operations to create and sustain value.
- 4 The MCPS is a copyright collection society which acts as agent for the party controlling the mechanical rights, whether this be music publisher or composer in licensing record companies to manufacture records reproducing copyright musical works and to distribute those records.
- 5 A fascinating article on the rise and fall of Napster can be found in *The Guardian*, February 13, 2001, p. 2. Its author was Duncan Campbell and its entitled "Napster loses fight to supply free music on the net".

References

- Alderman, J. (2001), *Sonic Boom: Napster, P2P and the Battle for the Future of Music*, Fourth Estate, London.
- Bain, J. (1956), *Barriers to New Competition*, Harvard University Press, Boston, MA.
- Bain, J. (1958), "Note on pricing in monopoly and oligopoly", in Heflebower, R.B. and Stockings, G.W. (Eds), *Readings in Industrial Organisation and Public Policy*, Richard D. Irwin, New York, NY.
- Bakos, Y. (1997), "Reducing buyer search costs: implications for electronic marketplaces", *Management Science*, Vol. 43, p. 12.
- Bakos, Y. and Brynjolfsson, E. (2000), "Aggregation and disaggregation of information goods: implications for bundling, site licensing and micropayment systems", in Kahin, B. and Varian, H. (Eds), *Internet Publishing and Beyond: The Economics of Digital Information and Intellectual Property*, MIT Press, Cambridge, MA.
- Caves, R. (2000), *Creative Industries*, The Free Press, New York, NY.
- Demsetz, H. (1982), "Barriers to entry", *American Economic Review*, Vol. 72, March, pp. 47-57.

- Fairfax, L.M. (1999), "When you wish upon a star: explaining the cautious growth of royalty-backed securitization", *Columbia Business Law Review*, pp. 441-88.
- Greenberg, P. and Erios, L. (2001), "One year ago: Mp3.com caves in to legal blow", pp. 1-3, available at: www.ecommercetimes.com (accessed 5 November 2001).
- Hammersley, B. (2002), "Working the web: P2P technology", *The Guardian Online*, 7 March, p. 4.
- Hardaker, G. and Graham, G. (2001), *Wired Marketing: Energising Business for E-commerce*, Wiley, New York, NY.
- Hotelling, H. (1929), "Stability in competition", *The Economic Journal*, March, pp. 41-57.
- Kretschmer, M., Klimis, G. and Choi, C. (1999), "Increasing returns and social contagion in cultural industries", *British Journal of Management*, Vol. 10, pp. S61-S72.
- Kretschmer, M., Klimis, G. and Wallis, R. (2001), "Music in electronic markets: an empirical study", *New Media and Society*, Vol. 3 No. 4, pp. 417-41.
- Magex (2001), "Digital economy: creating commercial success in the digital marketplace", available at: [www.magex.com/downloads/WPaper1\(1\).pdf](http://www.magex.com/downloads/WPaper1(1).pdf) (accessed 5 November 2001).
- MMC (1994), "The supply of recorded music: a report by the Monopolies and Mergers Commission on the supply in the UK of pre-recorded compact discs, vinyl discs and tapes containing music", Cmnd paper: 2599, June, HMSO, London.
- Modigliani, F. (1958), "New developments on the oligopoly front", *Journal of Political Economics*, Vol. 66, pp. 215-32.

- Porter, M.E. (1985), *Competitive Advantage: Creating and Sustaining Superior Performance*, The Free Press, New York, NY.
- Stigler, G.J. (1968), *The Organisation of Industry*, Richard D. Irwin, Homewood, IL.
- Von Weizsacker, C.C. (1980), "A welfare analysis of barriers to entry", *The Bell Journal of Economics*, Vol. 11 No. 2, pp. 399-420.

Further reading

- Baumol, W. (1982), "Contestable markets: an uprising in the theory of industry structure", *American Economic Review*, Vol. 72, March, pp. 1-15.
- Baumol, W., Panzar, J. and Willig, R. (1982), *Contestable Markets and the Theory of Industry Structure*, Harcourt Brace Jovanovich, New York, NY.
- Campbell, D. (2001), "Napster loses fight to supply free music on the net", *The Guardian*, February 13, p. 2.
- Dixit, A. (1980), "The role of investment in entry-deterrence", *Economic Journal*, Vol. 90, pp. 95-106.
- Dusenberry, J.S. (1949), *Income, Saving and the Theory of Consumer Behavior*, Harvard University Press, Cambridge, MA.
- Kahn, A.E. (1970), *The Economics of Regulation: Principles and Institutions*, Vol. 1, Wiley, New York, NY.
- Parikh, M. (1999), "The music industry in the digital world: waves of changes", available at: www.ite.poly.edu/htmls/musicwave01.htm (accessed 5 November 2001).