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A case of electronic commerce: The On-line Music Industry - Content, Regulation and Barriers to Development

Emma Janson and Robin Mansell

Science Policy Research Unit
Mantell Building
University of Sussex
Falmer, Brighton
BN1 9RF, UK

Tel: +44 (0) 1273 686758
Fax: +44 (0) 1273 685865
Email:
M.E.Winder@sussex.ac.uk
http://www.sussex.ac.uk/spru/

A Case of Electronic Commerce: The On-line Music Industry - Content, Regulation and Barriers to Development

by
Emma Janson and Robin Mansell
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The European music business consists of fast-moving, unit-led production, marketing, licensing and distribution functions. With the World Wide Web as a potential high-speed digital distribution channel, record companies will find it more difficult to control the distribution chain. New artists who can create their own product potentially will be able to produce, market and distribute their work without the involvement of the major record companies. This scenario is an example of disintermediation in the extreme and would result in the collapse of the record business of today. However this scenario may never fully be realised because of the actions that the key players in the record business may take to re-position themselves. The results of this study show that for the realisation of the benefits of Internet based music distribution services, a number of changes must take place, not only within organisations, but also in society at large. Improvements will be needed in financial, legal and regulatory frameworks and security, privacy and authentication issues will need to be resolved. The paper examines whether there are 'first-mover' advantages in early entry to the on-line music market. It shows that large retailers are moving into position to challenge the dominance of entrepreneurs in selling music on the Internet. The main first-mover advantages are the opportunity to build customer loyalty and to develop competitive advantage through acquiring tacit knowledge and information about customers' shopping habits. The main disadvantages facing the large retailers are associated with organisational problems rather than technical problems.

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1. Introduction*

Content, its packaging and the way it is sold, is an essential feature of the European Information Society. The European sound recording industry is a key asset. Three of the world's six largest music groups are European. Bertelsmann Music Group (Germany), Polygram (the Netherlands) and Thorn-EMI together with Time Warner (US), Universal (formerly MCA) (Canada) and Sony (Japan) account for about 75% of the world market for pre-recorded music, a market that was worth 31.5 bn ECU in 1995.[1] The music business also has many small companies. The fact that 60% of recordings sold in the EU originate there means that local audiences are likely to continue to demand 'local' products despite the 'globalisation' of the music industry.

The EU music industry provided more than 300,000 full time jobs and had a turnover of 18.8 bn ECU in 1995. There are over 3,000 record companies issuing over 25,000 albums and singles every year. The record companies themselves employ about 45,000 people. There are also some 85 CD manufacturing plants and some 80,000 people involved in retailing music.[2]

Technical change has been affecting the music industry in many ways. For example, digital audio broadcasting and digital audio radio is enabling consumers to listen to music on demand. The on-line retailing of music could make products available on a global basis but the accessibility and the build up of new markets depends on the diffusion of PCs and Internet access. In 1995, only US$100,000 of an estimated US$5 bn in on-line services revenues was attributable to music sales. Although industry observers project a market value approximating US$5 bn for on-line sales in the early years of the next decade, the potential of technology in this industry has yet to be turned into profits for the music companies.

Each change in the technical basis for product delivery in the music business creates new issues for copyright protection and the revenues that will accrue to larger and smaller companies and musicians. The music retail business is dominated by three major chains in the UK (HMV and Virgin) and one in the US (Tower Records). Will these large players adapt successfully to the new opportunities for on-line sales or will the opportunities created by advanced information and communication technologies provide a new stimulus to the European smaller producer market? Will they be overtaken by new entrepreneurial companies who are taking advantage of the low entry costs to Internet-based selling?

The early development of the on-line music market in the United Kingdom is the focus of this study. It examines whether there is a 'first-mover' advantage in entering the on-line music market and where it lies. A 'first mover' or technological leader is a firm which seeks to be the first to introduce technological changes that support its generic strategy. A first-mover advantage is said to exist if there are significant benefits to be gained in entering the market as a technological leader. Such an advantage may then be translated into a sustained competitive advantage which either creates a new earnings stream or enhances an existing one. The focus of this report is on the strategic plans of music retail companies rather than on consumer perspectives.

* An earlier draft of this working paper was prepared by Emma Janson as an MSc dissertation at the University of Sussex. Emma Janson gratefully acknowledges contributions by Christopher Codrington (The Internet Music & Video Shop), Jeremy Silver (EMI International), Ian Harmon (Virgin Entertainment Direct), Nick Pincott (Music Stop), Jackie Bullock (HMV), Mark Williamson (Britannia Music Club), David Lazaro (musician and Internet enthusiast) and Lawrence Harrison (The Simkins Partnership) who gave their valuable time for interviews. The earlier version has been edited and extended by Professor Robin Mansell, Science Policy Research Unit, University of Sussex. The views are those of the authors and not those of any organisation or institution.

1 Information Society Trends, 1997); and Miller Freeman Entertainment Ltd., 1997.

2 FT Music & Copyright, 1996, citing European Music Office (1996) *The Economic Importance of Music in the EU*, report for DG X, Brussels.

The analysis identifies several types of companies,both large and small, seeking to enter the on-line music retail market: high street retailers, record companies, mail-order catalogue retailers, start-up companies and artists themselves. Based on interviews conducted summer 1997 with representatives from these different sectors , the results offer valuable perspectives on the issue of 'first-mover advantages' in entering the on-line music market.

There is a lack of comprehensive, well documented information on Internet retailing and more specifically on the Internet music business. Nevertheless, it was possible to identify several types of companies, both large and small, that were seeking to enter the on-line music retail market: store retailers, record companies, mail-order catalogue retailers, start-up companies and artists themselves. The results offer valuable perspectives on the issue of first-mover advantages in entering the on-line music market.

The report is structured as follows. Section 2 provides background information on the record companies, record retailers and challenges to the on-line music industry. Section 3 offers an analysis of the present market situation, and the challenges and advantages of Internet commerce. The findings of the study are summarised in Section 4 illustrating the extent to which there is a first mover advantage in entering the on-line music market and where it lies. Section 5 discusses the extent to which the evidence points to important aspects of technological innovation and competitive advantage which stem from the first mover advantages faced by technological leaders in the music business. The conclusions in Section 6 look at the wider implications for the Internet as a medium for the sale of pre-recorded music.

The overall conclusion of this study is that large retailers are moving into position to challenge the dominance of entrepreneurs in selling music on the Internet. The main first-mover advantages identified by the entrepreneurs are the opportunity to build customer loyalty and to develop competitive advantage through acquiring both tacit knowledge and information about customers' shopping habits. There is currently a lack of consumer demand and profits are minimal and, therefore, such advantages are unlikely to yield a sustained competitive edge. The main disadvantages facing the large retailers are associated with organisational rather than technical problems. These disadvantages are likely to be outweighed by the benefits relating to their dominance in terms of market share. Most importantly the large retailers have the funds to promote on-line retail outlets and their dominant market share in the high street will enable them to catch up with, and overtake, the first mover companies based in the UK and other parts of Europe.

2. The Dynamics of the Music Industry

For many years the music business has had very little to do with music. It essentially consists of fast-moving, unit-led production, marketing, licensing and distribution functions. How much product will sell in which territories, how quickly can they ship, how fast can they re-stock and so on. With the World Wide Web (hereafter referred to as 'the Web') as a potential high-speed digital distribution channel, record companies will no longer be in a position to control the distribution chain. As a result they may be unable to shape the demand for a product. When music is distributed over the Internet, only one master copy is required. New artists who can create their own product potentially will be able to produce, market and distribute their work without the involvement of the major record companies. This scenario is an example of *disintermediation* (cutting out the middle layers of certain distribution channels) in the extreme and would result in the collapse of the record business of today. However it is an ideal that may never fully be realised. It disregards the possible actions that the key players in the multi-million ECU record business may take to re-position themselves in order to acquire a competitive edge in the changing conditions of the new Internet economy.

There are a number of complex technological and copyright issues that need to be resolved before the digital distribution of music can develop into a commercially viable product. For the foreseeable future, most consumers will continue to purchase hard copies of pre-recorded music, currently in the form of compact discs (CDs), cassettes and vinyls. These products can be purchased from a number of different sources including specialist music shops, supermarkets, petrol stations and mail order catalogues. During the 1990s, the Internet has been developed as a new medium for the exchange of information between businesses and consumers. It has the potential to enable merchants to incur lower costs in reaching consumers and supplying products, and to provide consumers with more choice and lower prices twenty-four hours a day, seven days a week. Although the amount of commerce conducted on the Web remains relatively small, its volume is increasing. Many companies are now looking into the possibility of on-line retailing.

The importance and implications of retailing on the Internet are likely to grow in the near future as technologies become more affordable and reliable, and as people become more aware of the potential efficiencies that can be achieved. Other benefits for organisations using the Internet as a retail outlet include the potential widening of their markets; better meeting of customer needs; faster introduction of innovative products and services; better customer-supplier interactivity; improved market intelligence, along with lower costs and faster turnover.[3] However, for coherent realisation of these benefits, there are a number of fundamental changes that must take place, not only within organisations, but also in society at large. A number of improvements must be made: financial, legal and regulatory frameworks must be made clear and coherent, and security, privacy and authentication issues must be addressed, both at the practical level and in legislation. In a recent survey in *The Economist* it was confirmed that most on-line music stores are losing money:

> ...on-line sales reached a mere $20 million last year, and industry-wide gross profits were just $200,000, according to the Red Herring, a technology magazine. MCI, an American telephone company, last year closed its 1-800-Music-Now site after spending nearly $40 million promoting it: its top CD sold only 400 units.[4]

Despite the problems, many companies have not been deterred from entering the on-line music market and must therefore perceive certain advantages in using the Internet as a medium for the sale of pre-recorded music.

Like other service industries, the music industry is repeatedly undergoing structural changes that are related to technological innovation. In Britain, it claims to be one of the country's largest export earners[5] and yet it has been the subject of surprisingly little attention in past and present research.[6] As the music industry is an innovation intensive industry it warrants more attention especially as it incorporates advanced information and communication technologies more centrally into its core marketing practices.

In the 1990s, companies are under pressure to grow and produce profit. An important measure of profit gains for retailers is gross margin per square foot. For many retailers, this number is either growing slowly or declining, partially reflecting increased competition.[7] Inadequate productivity, both per worker and per unit of space, is also reducing profit margins. With crowded domestic markets and competition constantly threatening operating profit, new ways of retailing are being explored by forward-thinking companies.

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3 European Commission 1997a.
4 Anderson, 1997, p. 14.
5 National Heritage Committee, 1993.
6 Klaes, 1997.
7 Kalakota and Whinston, 1997.

The relatively minor cost of establishing home pages that offer goods or services attracts both existing merchants and newcomers. Theoretically, anyone who opens or accesses a Web site can enter the market. Merchants are able to gain direct access to consumers, thereby avoiding the need to go through various intermediaries to reach them. This may make it possible for them to avoid certain intermediary costs, such as distribution inventories andupkeep of expensive retail shops. Technically the Web can be accessed from all over the world through the Internet. However, to become known and make a profit requires promotion, and in this respect incumbents with well-known names and brands are in a better position than new entrants, who need significant capital to advertise. Nevertheless, in some respects, new entrants are in a more advantageous position than incumbents, not only because of lower costs, but also because they may be better able to make quick changes in response to changes in consumer demand.

The possible entrants to the on-line music market are both large and small firms and include store front retailers, mail-order retailers, record companies and start-up enterprises with no previous experience in the music business. First movers often face disadvantages as well as advantages. Therefore it is strategically important for a company in considering whether to enter the on-line music market to understand the significance of the timing of market entry in relation to its competitors and the current state of advanced communication technologies and services.

3. The Music Business in the United Kingdom

The UK has a large and internationally important music industry. The retail value of sales in the UK amounts to over £1 billion per annum and UK employment associated with the industry exceeds 48,000.[8] In addition, the industry earns considerable income from licensing its recordings overseas. Records are sold both through shops which specialise in music and shops which sell a much wider range of products. The specialists include chains, such as HMV and Virgin/Our Price, and many small independent retailers. The non-specialists include multiples such as WH Smith and Woolworths, as well as an increasing number of ‘non-traditional’ outlets such as supermarkets and petrol stations. In addition mail order and record clubs account for some 12 per cent of the market in the UK.

The UK provides an interesting case study of developments in the light of the Internet’s potential as a sales medium. UK consumers are the world’s greatest spenders on music. In 1996, on average, they bought four albums per person compared to the European average of 2.3 albums, the US average of 3.9 albums and the global average of 0.8 albums per person.[9]

3.1 The Record Companies

The core activity of a record company is creating and exploiting copyright in sound recordings. Most record companies achieve this by signing contracts with artists under which the artist usually agrees to record exclusively with that record company for a period. In exchange for this commitment the artist will usually receive an advance of royalties at the start of work on each record album and, by virtue of copyright legislation, the record company will own the copyright in the recordings.

Copyright legislation, in Britain in the form of the Copyright Act 1956 and the Copyright, Design and Patent Act 1988, is an essential part of the development of the constituency of recorded music,[10] but this legislation is perceived as being increasingly inadequate to protect the interests of copyright

8 Monopolies and Mergers Commission, 1994.
9 International Record Industry Association (IFPI) (1996)
10 Klaes, 1997.

holders. Recorded music is information that, once obtained, can be easily duplicated and distributed, bypassing the control of the seller. The diffusion of tape recorders and the more recent development

of electronic distribution technology has compounded this problem. There is no accurate way to measure the scale of music piracy on the Web, but it is of growing concern to record companies, retailers and artists alike. The problem was highlighted in May 1997 when lawyers representing the British pop group, Oasis, issued a warning to Web sites offering bootlegs of the group's music and other copyrighted material for download, that it might sue.[11]

An artist will usually write his or her own songs which will be recorded in a studio with the help of a record producer. When a satisfactory master recording has been made the record company sends it to the manufacturing plants where it is reproduced on CDs, cassettes or vinyl. The most important activities of the record company will then be the marketing and promotion of the new release and its distribution to retailers. Promotion may take the form of videos and interviews on television, advertisements in the musical press and other media and personal appearances by the artist. Some promotion may be carried out jointly with particular retailers. In the case of a pop record, the aim will be to get the record played on the radio and to secure a place in the record charts, which will then lead to further exposure and increased sales.

There are five large multinational record companies operating in the UK which are known as 'the majors'. Table 1 shows market shares (by volume of albums sold in 1995 by the companies and their subsidiaries). Together these five companies have nearly a 77 per cent share of the UK market.

Table 1: UK Market Share of Major Record Companies 1995 (% Volume)

	Percentage
Thorn-EMI*	22.3
PolyGram	21.8
Sony	13.1
Warner	10.9
BMG	8.7
Others	23.2
Total	100.0

*Note: This figure includes Thorn-EMI's 50% share in Virgin Records
Source: MBI World Report 1997, p.213

The remaining 23 per cent of the market is supplied by some 600 independent record companies. Many of these are very small companies, some making only one or two releases a year. However, the independent companies are a very important part of the record industry since they are often at the leading edge of developments in pop music, with the ability to discover new talent and establish new fashions. They also have to face the risks inherent in developing a new repertoire.

Thorn-EMI, PolyGram, Sony, Warner and BMG all own and operate national distribution systems, distributing their own and third-party sound recordings to retailers, wholesalers and smaller distributors. Several of the majors also own and operate their own CD, cassette and vinyl record manufacturing facilities.

As well as supplying records in the UK, the record companies exploit their recordings in overseas markets. Normally this is done by licensing an overseas company to supply records in a particular country. In the case of the majors this is usually done through the record company's local affiliate. The independent record companies often rely on unconnected companies to perform this function, including the majors' overseas affiliates. Licence income generated in this way is important to UK

[11] Maclachlan, 1997.

record companies. The UK is second to the United States as a supplier of recorded music to the rest of the world. The industry's trade association, the British Phonographic Industry Ltd, estimates that 18 per cent of world sales have a connection with the work of UK artists, while the UK's home market represents only 7 per cent of world sales.

3.2 Retailing of Records

The largest retailers and their 1995 market shares are shown in Table 2. Together these companies make up almost 63 per cent of total retail sales.

Table 2: UK Music Retail Market Share 1995 (% Volume)

	Percentage
Virgin/OurPrice*	23.7
HMV (part of Thorn-EMI)	13.5
Woolworths	13.0
Britannia	6.7
WH Smith	6.0
Others	37.1
Total	100.0

*Note: Virgin/Our Price is owned by WH Smith (75%) and the Virgin Group (25%)
Source: MBI World Report 1997, p.212

Records reach the retailers from the record companies by a variety of routes. Some 60 per cent go directly from the record company's nominated distributor to the retailer, 28 per cent go through a wholesaler and the remaining 12 per cent reach consumers through mail order suppliers.[12] Almost all deliveries to retailers go directly to individual shops rather than to retailers' central warehouses. For example, each of WH Smith's outlets (roughly 300) receives deliveries directly from the major record companies and other distributors.

There is some limited price competition in retail prices as the retailers, at least to some extent, are selling the same repertoire. Their outlets are frequently in close proximity. They have to differentiate themselves by means of prices (and services). Stores offer special deals on certain albums, and prices vary not just between chains but also between different stores in the same chain.[13]

All of the major record companies operate their own distribution businesses, and so a retailer who orders directly from its distributors orders stock from several sources (the five majors plus up to 20 others for independent record companies' releases). Wholesalers generally handle the releases of all record companies and so a retailer only has to order from one wholesaler if it uses this route.

The relatively low cost of setting up a retail outlet on the Internet presents record companies with the possibility of selling directly to the consumer. In this way they expect to be able to undercut the prices of the retailers or increase their profit margins. However consumers may prefer the wider selection retailers are able to offer, retailers having the advantage of being able to sell stock from a variety of different record labels. The Internet as a new retail outlet provides the means for retailers to widen their markets without building new stores. It also allows artists to sell directly to the consumer, although they are likely to lack the influence and funding to promote their work.

12 Monopolies and Mergers Commission, 1994.
13 Klaes, 1997: 1226.

3.3 Challenges to the On-line Music Industry

By 1997 there were Web-based services that offered limited downloads of audio-visual material[14] and given that network bandwidth is expected to increase rapidly over the next decade, it is conceivable that the Internet will become a major distribution channel for music and video products. On-line distribution may make the physical product redundant, with serious implications for the manufacture and distribution of CDs, cassettes, vinyls, plastic cases, album covers, etc. There are predictions that sales of disc-based media will level off over the next five years then start to drop, and that electronic distribution will take over.[15] John Richardson, company secretary at Cerberus Central, forecasts that digital distribution will be on a par with CD sales by 1999.[16] However, sceptics argue that such predictions ignore consumer requirements: the very nature of downloading music to a PC restricts its mobility and many music enthusiasts like to own a material product complete with cover art, lyrics and notes on the artist.

David Lazaro,[17] a musician and an Internet enthusiast, emphasises three factors that are inhibiting the development of digital distribution of music. The first is the limitations of telecommunication network capacity for music data transmission. The second is that the record companies are trying to protect their manufacturing and distribution operations by strategically choosing not to develop the market in this way. The third factor relates to the international licensing and copyright issues that are complicated by Internet distribution: digital music is easily duplicated, and existing copyright-protected material may be re-used by re-combination.

Copyright lies at the heart of the recorded music industry. It allows record companies to invest money and enterprise in creating commercial recordings which can be exploited in both the UK and overseas markets because they have legal protection against unauthorised reproduction. Copyright is also important in ensuring that the talents of successful artists and songwriters are rewarded.

Two principal types of copyright are involved.[18] First, copyright exists in the music which is performed by an artist, that is, in the words and music of a song and in the composition of a classical composer. Second, a separate copyright exists in the sound recording when a particular artist performs a musical work and it is recorded. In the UK, music copyright lasts until 50 years after the death of the composer and copyright in a sound recording lasts until 50 years after the record is released.

The copyright in a sound recording will normally be owned by the record company, though the copyrights can be licensed or assigned to others. The copyright legislation grants a bundle of rights to a copyright owner which includes the exclusive right to make copies and the exclusive right to perform the work in public (including broadcasting). Thus record companies also receive licence fees every time a record is played in public (e.g. in clubs or pubs) or is played on the radio or television.

Copyright is construed as being territorial in its application and is underpinned by international agreements.[19] According to the present legal structure, copyright owners can licence the exclusive right to issue copies of their work to the public. The territorial character of this right implies that the copyright owner can grant individual licences for different territories, so that imports infringe the

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14 The Cerberus Digital Jukebox allows users to purchase CD-quality audio on-line. When a customer logs on, snippets of songs can be obtained for free. A full song requires registration and costs around 60 pence (ECU 0.4) (Morrell, 1997).

15 Rundgren 1996.

16 Morrell, 1997.

17 David Lazaro was interviewed on 10 July 1997 for this study.

18 Monopolies and Mergers Commission, 1994.

19 Mansell and Steinmueller, 1995.

copyright. This allows the record companies to divide the world market into independent territorial sub-markets and to employ discriminatory pricing policies.[20]

There are several treaties that establish international norms for the protection of copyrights, most notably the Berne Convention for the Protection of Literary and Artistic Works.[21] These treaties link nearly all major trading nations and provide them with a means of protecting, under their own laws, each other's copyrighted works and sound recordings. Although these treaties do establish certain minimum levels of protection, they need to be updated to account for changes in advanced communication technologies and services. Some observers believe that cyberspace will be viewed as a single territory in future legislation - perhaps in 5 to 10 years' time.[22] Until then there will be a great deal of confusion. For example, the rights of a UK licensee may or may not be infringed if an American licensee offers the copyrighted music via the Internet to British customers.

In summary, all of the key players in the music business will be challenged by technical changes in network technologies and especially by the Internet. Infrastructure may be inhibiting the development of digital distribution, but the music industry may not be ready for such innovative developments. Already the UK music industry is lagging behind that of the United States in entering the on-line market. Furthermore, existing copyright legislation is believed to be insufficient to protect companies in this new arena.

4. The Internet as a Sales Medium

This section reviews the current state of the on-line market in terms of the number of people who have access to the Internet, and the challenges and advantages of Internet commerce. Clearly not all people with access to the Internet are interested in on-line shopping, but statistics for consumer spending on the Internet are scarce and mainly focused on forecasts for the American market. In a survey of Internet users in April 1997, 73% had used the Web for shopping in one way or another.[23] According to projections by International Data,[24] 46 million consumers in America will be buying on-line by the year 2000, spending an average of US$350 a year each, which amounts to $16.1 billion. Forrester Research has estimated total consumer on-line spending more conservatively at $6.6 billion by the same year.[25]

4.1 The Present Situation

Ever since commercial use of the Internet was allowed, there has been a huge growth in subscribers and traffic. The replacement of the Internet's standard UNIX command-line interface with the user-friendly Web architecture, supported by 'browsers' such as Netscape Navigator and Microsoft Explorer, has been instrumental in making the Internet significantly more accessible to the general consumer. Additionally, consumer awareness has been significantly increased since early 1996 with extensive press coverage and debate about the 'information superhighway' and the Internet in particular.

20 Klaes, 1997.
21 Information Infrastructure Task Force, 1997b.
22 Lawrence Harrison, partner in The Simkins Partnership, interviewed 14 August 1997.
23 Survey published by CommerceNet, an industry consortiu, and Nielsen, a media-research firm, quoted in an article by C. Anderson, 'Electronic Commerce', *The Economist,* 10 May 1997.
24 Anderson, 1997.
25 Rebello, 1996.

According to Internet Society estimates, the Internet now has 30 million users on 10 million computers connected to over 240,000 networks in over 100 countries. Further, it is estimated that one

million more people become Internet users each month[26] and that the World Wide Web (a part of the Internet with consistently structures links and data) holds over 40 million individual documents. It is however only since the middle of 1996 that it has had a substantial impact on businesses and individual consumers in the UK.[27]

Access to the Internet appears to be closely correlated with age and social status, with the younger and wealthier sections of the population being more likely to have gained experience and familiarity with this media than other groups. Currently, the UK consumer base is small and restricted to a few 'pioneers' who have a suitable personal computer at home and who can afford to experiment with this new medium. The majority of users in 1995 were American, as can be seen from Table 3.

Table 3: Internet Users By Geographic Region, 1995

	1995 %
United States	75
Canada	9
United Kingdom	3
Australia	2
Rest of world	11
Total	100

Source: Yahoo/Jupiter cited in '*The Internet 1997*', Market Assessment Publications Ltd., 1997

4.2 Challenges to Internet Commerce

The most serious obstacle to expanded Internet commerce is the capacity of the infrastructure which supports it. Certainly for the vast majority of home users in the UK, the infrastructure is the existing telephone network. This network is widespread to the point of being universal and has the great benefit of supporting two-way transmissions. However, it is extremely limited (in its current form) in its capacity to transmit large quantities of data. Slow transmission speeds have stunted the digital distribution of music via the Internet: 'downloading a rock album can easily take in excess of 60 minutes'.[28] Delays in data transmission are also increasing due to congestion caused by the rapid growth in the number of users and the rising volume of data, audio and video traffic travelling over the Internet. There are a number of technological developments that would improve data transmission rates, including more sophisticated compression techniques, faster modems and transmission devices, and wider electronic pathways with a greater capacity to carry digitised data.

A broadband, optically-based communication infrastructure which reaches directly into most homes in the UK, is at least ten years away according to some estimates, and may never be completely built. There are a number of network technologies being implemented which will provide greater interim bandwidth. In the UK, there are several possibilities for a universal high-speed, high-capacity communication network. One is the integrated services digital network (ISDN) which is being offered primarily to business users at charges of about £400 for an ISDN connection as of June 1996.[29] Another is the cable network which is in the process of being developed but has so far attracted relatively few subscribers in the UK. Although cable is now accessible to around nine million households - around 45% of all homes in the UK - just over two million people subscribe to cable

26 Kalakota and Whinston, 1997.
27 Henning, 1997.
28 Henning 1997: 59.
29 Hening, 1997.

TV.[30] Yet others include the upgrading of the existing fixed network using xADSL (Asynchronous Digital Subscriber Lines) and the use of various wireless digital services.

Entry requirements at the user end are manifold and costs can be significant for consumer users. Access requires an initial investment in a network-capable terminal device such as a personal computer and modem. In order to access the Internet, a customer must connect, through a telephone line or a leased line, to an Internet Service Provider (ISP). Thus, residential consumers pay both their local public telecommunication operator (for connection, rental and local call usage of an extra telephone line)[31] and their ISP (usually a flat-rate fee with a usage charge above a certain limit).

There are developments which will reduce this cost barrier to entry quite considerably. Set-top boxes which provide access to the Internet via an ordinary television receiver came onto the market in the United States in September 1996.[32] Internet software is being incorporated into screen telephones, digital mobile phones, new digital television sets and PCs. However, the success of these products depends not only on the quality and price of the hardware but also on the quality of content being provided on the Internet.

Before Internet commerce can move forward and be used by significant numbers of Internet users, several issues need to be resolved: trust, payment systems, and security. Internet users do not yet know who to trust on-line or what applications will actually prevent misuse. As regards privacy, Internet commerce allows companies to track individuals and their buying patterns. Consumer expectations of privacy vary between individuals and between cultures, are flexible and change over time. Consumers need to feel secure that companies will not violate their privacy or use personal information for intrusive marketing campaigns. One way to prevent the latter problem is for companies to allow consumers to indicate how their personal information can be used.[33]

According to Coopers and Lybrand, 80% of all Internet users are concerned about security issues and less than 20% of Internet users have used credit cards to make purchases on-line, despite the fact that some companies are offering their customers the option of electronic payment via secure transmission routes.[34] The payment options available to the consumer following product selection by browsing through a company's web site are as follows:

- purchase in the high street;
- purchase by credit card over the telephone or fax;
- purchase by electronic payment in the form of an electronic check, digital cash, or credit card number.

In order to enable on-line payment for information and ensure its safe delivery, the payment services infrastructure needs to develop methods of encryption (making contents indecipherable except for the intended recipient) and authentication (making sure that customers are who they say they are) that ensure security of contents travelling on the network. The development of secure transactions and secure on-line payment instruments (such as electronic cash) is one of the most active areas of electronic commerce research and development.[35]

30 Henning, 1997.
31 The majority of households in the UK have access to only one telephone line.
32 Key Note, 1996.
33 Littwin, 1996.
34 Key Note, 1996.
35 European Commission, 1997b; Kalakota and Whinston, 1997; Newing, 1996; Thompston, 1997.

4.3 Advantages of Internet Commerce

The main advantage that the Internet offers to retailers is the ability to sell directly to consumers, without the infrastructure normally associated with a fixed location or direct sales operation. Organisations perceive the Internet as a means of widening their markets, both nationally and internationally and being able to take orders day and night.[36] Amazon, the most popular bookstore on the Internet, is able to offer a selection of 2.5 million books, ten times as many as the biggest book shop, but keeps only the top-selling 400 or so titles in stock. The cost savings associated with lower overheads enable Amazon to charge between 10% and 40% below list price, excluding shipping costs.[37]

Some retailers have been forced to abandon their on-line operations due to lack of demand. This was the principal reason for the closure of IBM's World Avenue Internet Mall in July 1997.[38] The benefits for other on-line stores are indirect.

Firms such as Tesco are not making any money; delivering orders for £5 does not cover the costs of picking, packing and fulfilment. They hope to learn enough about their customers to make it possible for them to shift their buying patterns away from shopping at weekends when it is very busy, enabling the store to spread the load.[39]

It is worth mentioning that consumers potentially have much to gain from electronic commerce when they buy goods and services from their own homes: a wider choice, easier and more comprehensive pre-purchase information, and potentially lower prices.[40] The current reality is different:

Just finding something to buy is a triumph, never mind comparing prices and paying for it. Between the endless lists of on-line merchants and the delays as each graphics-heavy shop-front downloads, it may take up to an hour just to find a product.[41]

The evidence is that home shopping on the Internet is an extremely small market. For example, it has been estimated that just under 25,000 UK households have spent £1 million via Internet shopping services. Tesco and Argos, two large retail outlets, have had very slow sales, but smaller specialists have been more successful, partly because more of their customers are computer literate.[42] The best selling products on the Internet are computers and related products, music CDs, airline tickets and books.[43] Internet retailing is still far from being a competitive threat to more traditional store retailing, but it is becoming increasingly attractive as network technology and applications improve, and retailers gain experience.

In summary, many companies are spending large amounts to develop an Internet presence. Nevertheless, the actual volume of commerce on the Internet is still low relative to the amount of attention the Internet attracts. Internet access costs are the main deterrent to consumers, especially outside the United States. In addition to the initial investment in hardware, most residential consumers pay charges for connection to an Internet Service Provider, line rental (telephone or cable) and local call usage whilst on-line. It is not surprising therefore, that the Internet has taken off first and fastest

36 Levinson and Rubin, 1995.
37 Anderson, 1997.
38 Currid, 1997: Semilof, 1997.
39 Young, 1997: 46.
40 European Commission, 1997b.
41 Anderson, 1997:3.
42 Key Note, 1996.
43 Rebello, 1996.

in North America where Local Exchange Carriers do not normally require payment of usage-based local call charges and where Internet Service Providers are exempted from local interconnection

charges.[44] This may help to explain why the first-movers to the on-line music market are companies based in the United States.

5. Developing the On-line Music Market

In this study, the aim was to interview representatives from different types of record retailers in order to gain insight into their individual marketing strategies. The most significant first-mover advantages and disadvantages perceived by the companies were the main focus of the interviews.

There are four distinct groups of on-line retailers:[45]

- Retailers that operate off-line stores, 'getting their feet wet' with on-line storefronts.
- Retailers such as cataloguers who are concerned with the new Web-based methods of catalogue retailing.
- 'New age' retailers that do not currently operate retail businesses, but understand how this new medium can revolutionise shopping.
- Manufacturers exploring the potential to go 'direct to consumers'.

In the case of on-line music retailers, the first group encompasses retailers such as Tower Records in the United States and HMV in the UK. The second group comprises mail-order catalogue retailers such as Britannia Music. The third group is made up of start-up companies such as CDNow based in the United States, and the fourth group refers to the manufacturers and may be interpreted more broadly to include both the record companies involved in producing records and the artists themselves, rather than the manufacturers of the tangible product, i.e., the CD, cassette or vinyl.

The company selection process is described in Annex 1. The 'snowball effect' was used to select interviewees whereby contacts were made from referrals by the initial respondents. The first step was to identify the UK-based on-line music retailers by carrying out an Internet search. There were a large number of music-related Web sites but it was difficult to categorise them by function or geographical area. An Internet search on 'music shop' resulted in the following hits (Table 4):

Table 4: Results of an Internet Search for Music Shops, 6 August 1997

Search engine	Search on {music shop}	Search on {'music shop'}
Alta Vista	1,785,550	2,555
Infoseek	1,277,873	394
WebCrawler	186,958	4,096

*The quotation marks '' are used to search for a phrase.

These numbers are misleading: many sites consist of nothing more than advertising, and others belong to obscure vendors with few products and questionable policies. The next steps involved identifying the UK-based on-line music retailers and obtaining background information about the industry. Interviews were carried out focusing on four issues:

44 International Telecommunication Union, 1997.

45 Kalakota and Whinston, 1997: 224.

(i) The company's marketing strategy with respect to the Internet

(ii) The barriers and opportunities to retailing music on-line

(iii) Perceived 'first-mover advantage' in entering this market

(iv) The direction in which the Internet music business is heading

5.1 Music Shops on the Internet

The Internet is swamped with music, but few music sites are truly commercial. Most are used for relationship marketing and the commercial benefits appear elsewhere. These promotional sites aim to advertise a company's brands, goods and services. Transactional sites may promote new products or special offers, but are also capable of processing payment transactions (usually via secure transmission routes) and delivering - via a database - real time pricing and information to the user. They also have a customer service dimension and a back-end fulfilment mechanism.

The transactional music sites differ widely in terms of services offered. One of the largest on-line music stores and a leading entrepreneur is CDNow,[46] an Internet start-up company based in the United States. It has been described as 'one of the most successful retail sites on the net'[47] although this measure of success is rather misleading because in the same paragraph CDNow is reported to be making only 'an operational profit'. A review of the site's features is an effective benchmark for the appraisal of the UK-based on-line music shops.

CDNow offers a broad selection of more than 165,000 titles on CD and cassette, and 8,500 music videos.[48] There is a good search facility, for example, in searching for a classical recording the composer can be specified, the title of the album or composition, the performer or soloist, the conductor, the record label, the primary instrument, the genre, and several other elements. Information about payment methods, credit card security, shipping costs, delivery times, refunds, etc. is well organised and easily accessible. The advantages for shopping at this site are promoted as follows:

> One of the many things that sets us aside from a standard record store is our music information. We've got in-depth reviews, ratings, biographies, discussion groups and a variety of sound samples for almost every artist in our catalogue...[49]

The CDNow site is fully transactional and purchases can be made using Netscape's secure server encryption software to secure on-line credit card transactions, or by electronic cash. However, there is little incentive for UK-based customers to buy music which is easily available in the UK. Non-US orders take three weeks to ship and shipping charges to the UK are expensive (US$13.49 for the first 3 items, $1.99 each for the next 3 items and $1.50 for each additional item).

The closest British equivalent of CDNow is the Internet Music Shop[50] which offers around 127,000 CDs, cassettes and vinyls and 27,000 videos for sale on-line. The major British retailers are noticeably absent from the on-line market, unlike the American company Tower Records which has developed an impressive transactional site[51]. However, the majors will arrive soon, and both HMV and Virgin Megastores are planning to launch Internet retail outlets. There are two sets of predictions of how the

46 http://www.cdnow.com
47 Waldman, 1997: 8.
48 Martini, 1996.
49 http://cdnow.com, July 1997.
50 http://www.musicshop.co.uk
51 http://www.towerrecords.com

market will develop. First, that the entrepreneurs have managed to build an unassailable market share on-line and the slow behaviour of the major retailers is going to leave them lagging behind. Second, that entrepreneurs such as the Internet Music Shop are simply stuffing themselves on the starters, that the main course is yet to come and, when it does, the big boys will arrive and swiftly shove them out the way and gorge themselves.[52]

There are different viewpoints on whether there are advantages in being first to enter the on-line music market.

5.2 Retail Outlets on the Internet

Music Stop is a small independent music company with two stores in Bristol.[53] Their mail order service via the Internet was set up two years ago by Nick Pincott, a partner of the company. Although Pincott lacked the technical know-how required to establish an on-line retail outlet, he avoided outsourcing the project and adopted a strategy of 'learning by doing' in order to keep costs to a minimum. The site was set up for less than £1,000 and offers a catalogue of 200 albums. The site now contributes to approximately two per cent of turnover, generating between £5,000 and £6,000 a year. There are now plans to improve the search engine and graphics, add shopping basket facilities, set up a new database of products and install a secure server for credit card transactions. Customers are predominantly from the United States and are frequently looking for albums that are difficult to find in their locality.

No first-mover advantages were identified before entry into the on-line market, but the company has built up a base of repeat customers. The main barriers to entering the on-line market were cost and technical knowledge. It was prohibitively expensive to employ both graphic designers to improve the appearance of the Web site, and technical consultants to help with the implementation and technical change. This company sees the market as a level playing field on which Music Stop is able to compete with the larger entrepreneurs such as the Internet Music Shop. The brand names of the major British retailers may be unknown in other parts of the world and the importance of building an on-line customer base before the market becomes saturated was emphasised.

There has been positive feedback from many of the customers who like the personalised service this company provides, but it is very time-consuming to answer all enquiries personally and to search for items not in stock. If the turnover does not dramatically improve, the company may close down its Web site. The project has been a personal learning experience and has not involved other employees. Closure of this site therefore seems inevitable as success would lead to an unmanageable work load.

Virgin Entertainment Direct (VED) is the mail order division of Virgin/Our Price.[54] The potential for an Internet retail outlet was first discussed by the group's parent company, WH Smith, in March 1996. The electronic commerce project was strategically delegated to VED to develop under the Virgin name. This was because Virgin's innovative brand image and reputation seemed to be appropriate for this new field. In entering the on-line music market, brand image was more important to VED than being first to marketon-line. VED's intention for the on-line store is to mirror the product range offered in the largest Virgin Megastore in London. It is believed that this will not adversely impact on sales from the existing related outlets, but instead will attract new customers from around the world. VED views itself as a first-mover in the on-line market in the UK, with Tower Records, CDNow and Music Boulevard being the first-movers in the US.

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52 Waldman, 1997: 8.

53 Interview 18 July 1996, Music Stop.

54 Interview 21 July 1997 with Virgin Entertainment Direct Ltd, London

Although VED lacked the technical know-how to set up an on-line store, the company has the advantage of being given preferential rates for services supplied by Virgin Net, such as graphic design capabilities and technical consultancy. There are two other key advantages of being a large firm linked to a variety of companies: the first is the potential to provide a basket of products in the on-line store, for example books and magazines could be offered by WH Smith; the second is the funding available for a marketing campaign to advertise the Web site address via posters in their high street stores, and television and radio advertisements, etc.

The complications of dealing with the distribution of individual orders were not seen as barriers to entering the on-line market because VED already has an office for dealing with this in connection with other mail order projects. No concern about the security of transactions was expressed, although it was acknowledged that customers need to be encouraged to use on-line payment methods. The digital distribution of music was not seen as a big threat to the music market in the foreseeable future, and the potential price undercutting by record companies that may develop retail outlets on the Internet was considered to be a benefit. The retailers buy records at around £8-9 and sell them at around £13-14. Potentially the record companies could sell records directly to the consumer either at the wholesale price to attract more customers or at the retail price at an increased profit.

This major high street music retailer (Retailer X) had already invested two years in setting up fulfilment operations for a mail order catalogue.[55] Retailer X believed that order fulfilment and the maintenance of an up-to-date database of products are major barriers to entry to the on-line music market for the high street retailers. The projects manager of this company believed that first-mover advantages exist for small companies that are specialist on-line entrepreneurs because they may be able to build market share with low overheads. The large retailers have two key disadvantages: the complications of restructuring their business processes and price differentials between their high street retail outlets that would be highlighted by universal pricing on the Internet.

Retailer X is believed to be in a good position to enter the on-line market relative to its competitors. The company's business processes have been realigned to cater for the on-line market. Nevertheless, there is not yet a sufficient number of Internet users interested in on-line shopping to ensure success in this new market and therefore Retailer X is not intending to develop a fully transactional site at present. Instead, the company has invested around £80,000 in developing a promotional site to 'test the waters'.

5.3 Mail Order Retailer

The Britannia Music Club will enter the on-line market in October 1997, despite the fact that the Marketing Director believes that there are no advantages in being an early entrant to this market.[56] The decision to go on-line resulted from pressure from the Chairman and was not made for commercial reasons. The project is believed to be a waste of time, effort and process. Only a small percentage of consumers have access to the Internet, and these consumers are not part of Britannia's target market. This is perhaps a short-sighted viewpoint as on-line retailing could be seen as an opportunity to attract new customers while avoiding the printing costs of the hard copy mail order catalogue.

The proposed Web site will have a secure server but customers will be unable to listen to sound bites. The graphic design of the site was 'extremely expensive' and although there has been no pilot project in the UK, Britannia's sister company in France has already entered the on-line market. Home shopping via digital television was believed to have a much brighter future and is expected to be more popular with the company's target market. He envisages a site where persuasive sales personnel

55 Interview 15 August 1997 with a major High Street music retailer.

56 Interview 24 August 1997 with Britannia Music Club, Romford, Essex.

enthuse about a product and customers then order by remote control. Although the Marketing Director was extremely negative about Internet retailing, Britannia was considered to be in an advantageous position relative to the record retailers and record companies because the fulfilment operations are already in place.

5.4 Start-up Internet Music Retailer

The Internet Music Shop (IMS) describes itself as 'The Largest On-line Multimedia Store in Europe' and offers around 150,000 different CDs and videos for sale on-line.[57] The site was launched in November 1995 and attracts around 1,500 people a day, 6% of whom make a purchase. Monthly sales of £25,000 are growing at around 29% a month. IMS's Managing and Marketing Director, had identified two key advantages to entering the on-line market. First, IMS has already created strong customer loyalty (40% of customers come back) and many customers to the site are from international locations where the major UK record retailers are scarcely known. Second, IMS has had a head start in the learning process and is currently able to focus on future strategy, for example by analysing the accumulated information on consumer buying habits and targeting promotions accordingly. The major retailers were regarded as being 'in development' and as battling with organisational problems. The company is not overly worried by the arrival of the music industry majors.

5.5 Record Company

The potential for the Internet as a sales medium for music was investigated at EMI International two or three years ago.[58] The Vice President - Interactive Media, had identified three key factors contributing to this potential. The first was that music is easily digitised; the second, that the demographics of the Internet are equivalent to the demographics of the popular music market: young white males; and the third, that both the Internet audience and the creation of popular music thrive on 'hype'.

EMI is in the process of establishing its Internet presence: Virgin Records has set up a promotional Web site and HMV are currently developing one. According to EMI, there are no significant advantages in entry to the on-line music market for the majors because the market is insufficiently developed at present to yield significant profits. When electronic commerce really takes off, the majors will have the market pull to overtake the first movers.

The first-movers are considered to be American firms and the UK majors are believed to be lagging behind. Price competition is expected to become an increasingly important factor in the global marketplace of the Internet. The technology for the electronic delivery of music is forecast to have developed sufficiently for widespread commercial exploitation within five years. Market development brings a potential danger of devaluing the music products by flooding the market with 'liquid music' because the music business relies heavily on perceived value by the consumer.

Another problem for EMI is likely to be the conflict between record companies and record retailers in the on-line marketplace. Virgin Records could sell directly to the consumer via the Internet but they would then be supplying consumers in competition with their suppliers. For EMI, which owns a record company and a record retailer, they will be in competition with themselves. This might be put to advantage by instigating price wars to attract new customers. One scenario may result in the simple removal of intermediary chains in the music industry as a result of disintermediation. Another scenario would enable value to be transferred via alternative delivery mechanisms resulting in a

[57] Interview, 15 August 1997 with The Internet Music Shop, Abingdon, Oxfordshire.

[58] Interview 15 August 1997 with Interactive Media, EMI International, London.

process of 're-intermediation'. The control of different elements in the production value chain would move to different players.

6. Technological Innovation and Competitive Advantage

The experiences of the companies interviewed in this study illustrate very different perspectives of the advantages of early or late entry into a market experiencing very rapid technological innovation. How can competitors' advantage be established and maintained in the Internet marketplace? The literature on innovation and technical change offers a way of understanding why some companies lead and others choose to follow.

The decision to become a technological leader or follower can be a way of achieving either low cost or differentiation, as illustrated in Table 5. There may be more than one technological leader in an industry because of the many technologies involved and the different types of competitive advantage that are sought. Technological 'followership' is regarded as a conscious and active strategy in which a firm explicitly chooses not to be the first to introduce innovations.

Table 5: Technological Leadership and Competitive Advantage

	Technological Leadership	Technological 'Followership'
Cost Advantage	Pioneer the lowest-cost product design. Be the first firm down the learning curve. Create low cost ways of performing value activities.	Lower the cost of the product or value activities by learning from the leader's experience. Avoid R&D costs through imitation.
Differentiation	Pioneer a unique product that increases buyer value. Innovate in other activities to increase buyer value.	Adapt the product or delivery system more closely to buyer needs by learning from the leader's experience.

Source: Porter (1985) p. 181.

Technological leadership is strategically desirable when first-mover advantages exist and outweigh possible disadvantages. Michael Porter identifies a number of different types of potential first-mover advantage. [59] These include:

> *Reputation.* A firm that moves first may establish a reputation as the pioneer or leader. Leadership places a firm, at least temporarily, in the position of being unique which can produce long-term image benefits not available to others. A first mover may be first to serve buyers and thus to establish relationships where there may be loyalty. The significance of any reputation advantage from leadership will depend on the credibility of a firm and its capacity to invest in marketing. A small company may not succeed in enhancing its reputation by moving first because it lacks the resources to publicise its lead.
>
> *Proprietary Learning Curve.* A first mover gains a cost or differentiation advantage if there is a proprietary learning curve in value activities that are affected by the early move. The first mover begins down the learning curve first in the affected activities, and may establish a durable cost or differentiation advantage if it can keep its learning proprietary.

[59] Porter, 1985, pp. 186-188.

Favourable Access to Facilities, Inputs or Other Scarce Resources. A first mover can often enjoy at least a temporary advantage in access to purchased inputs or other resources, because it contracts for them before market forces reflect the full impact of the change it is pioneering. A firm may get its pick of sites for facilities, for example, or favourable deals with raw material suppliers eager for new business. Market forces will eventually bid up the prices of these inputs as new competitors come onto the market.

Definition of Standards. A first mover can define the standards for technology or for other activities, forcing later movers to adopt them. These standards in turn, make the firm's position more sustainable.

Institutional Barriers. A first mover may enjoy institutional barriers against imitation. The first mover may secure patents, or being first into a country may give it special status with government.

Early Profits. In some industries, a first mover may be in a position to enjoy temporarily high profits from its position. It may be able to contract with buyers at high prices during early scarcity of a new item, for example, or sell to buyers who value the new technology very highly.

First-mover advantages can also accrue to those companies moving first into a geographic area. The Internet is in a sense a new geographic area where there are practically no country borders: it is technically possible for a single Web site to make a commercial offer that is available throughout the world. All consumers accessing that site can place orders for goods and services from their home or office PC, however distant the server being accessed.

Where the first mover does not have adequate resources, the first early mover with resources can often be the firm to gain the benefits of first-mover advantages. This classification relates to product innovation rather than process innovation. Studies of the advantages of follower firms in the manufacturing sector have suggested that imitators can often outperform innovators if they are better positioned with respect to critical complementary assets.[60] Services such as marketing, competitive manufacturing, and after-sales support are almost always needed. In video cassette recorders, for example, the American firm Ampex pioneered the product but Japanese firms invested heavily to improve the technology, produce units cheaply, and translate their lead into first-mover advantages.

First-mover disadvantages stem from two broad sources, the costs of pioneering and the risk that conditions will change. The types of potential first-mover disadvantages include:[61]

Pioneering Costs - such as educating buyers, developing infrastructure in areas such as service facilities and training, and investing in the development of complementary products.

Demand Uncertainty - a first mover bears the risk of uncertainty over future demand.

Changes in Buyer Needs - a first mover is vulnerable if buyer needs change and its technology is no longer valued. Unless buyer needs shift radically, substantially changing the technology required to serve them, however, a first mover can maintain its lead by modifying the technology over time.

60 Teece, 1986.

61 Porter, 1985, pp. 189-191.

Specificity of Investments to Early Generations or Factor Costs. A first mover may be at a disadvantage if early investments are specific to the current technology and cannot be easily modified for later generations.

Technological Discontinuities - technological discontinuities work against the first mover by making obsolete its investments in the established technology. Technological discontinuities are major shifts in technology that a first mover may be ill-prepared to respond to given its investment in the old technology. Discontinuity favours the fast follower who does not bear the high cost of pioneering. Where technology evolves along a relatively continuous path, however, a first mover's head start is an advantage. It can transfer learning from the old technology to the new and stay ahead on the learning curve.

Low-cost Imitation - a first mover exposes itself to followers who may be able to imitate the innovation at lower cost than the cost of innovating. Followers often have to bear some costs of imitation and adaptation, however, which work to the benefit of the first mover.

Although such first-mover disadvantages may induce some firms to assume the position of 'followership', companies that do not respond to important technological developments may be forced to accept changes that others initiate and will find themselves at a competitive disadvantage.

In this study the concept of first-mover advantage provides a basis for investigating barriers to and opportunities for entry to the on-line music industry in the face of technological innovations in advanced communication technologies and services. Developments in technology are making the electronic distribution of music achievable and the implications of 'liquid music' (pre-recorded music stored and distributed electronically) are increasingly important for the industry.

This study has focused on the current state of the on-line music market which predominantly involves the sale of physical products (CDs, cassettes or vinyls) via a computerised form of mail order. The results of the investigation of the positions of UK-based firms and their strategic moves to locate themselves in a position that will sustain long-term competitive advantages show that there are *first-mover advantages* in entering the on-line music market. Innovative reputation was seen as an important first-mover advantage for the major retailers while the learning curve and early profits were more significant to the smaller entrepreneurs (see Table 6).

Table 6: Potential First-Mover Advantages in the On-line Music Market

First-Mover Advantage	Major Retailers	Entrepreneurs
Reputation	✔	✘
Proprietary Learning Curve	✘	✔
Early Profits	✘	(✔)

Key: ✔ = Significant; (✔) = Marginally significant; ✘ = Not significant.

Although Retailer X indicated that order fulfilment and product database development were not problems, this view needs to be considered alongside the fact that the project had taken so long to develop. Similarly, the Internet Music Shop had a very optimistic view of consumer demand in the light of the company's failure to profit as yet from its on-line music business.

This is a new and fast-developing area. An investigation of the American first-movers for comparison with the UK market, or a detailed analysis of price differentials between the on-line and traditional markets would indicate differences in the perceptions of market development trends in each country. Further analysis should also focus on the viewpoints of the artists and the perspectives of the consumer.

7. Conclusion

Major players in the UK music business are preparing themselves for the arrival of electronic shopping, and retailers are developing Web sites as part of their overall marketing strategy. The pioneers of on-line retailing are start-up companies with technical know-how, and the larger organisations appear to be lagging behind. This study focused on whether there is a first-mover advantage in entering the on-line music market and where it lies. Although different views exist on the nature of first-mover advantages, it is unlikely that the entrepreneurs in the on-line music industry will be able to sustain a competitive lead in the marketplace when the major players arrive. The five major record retailers in the UK have a total market share of 63% and possess the funds to influence and redefine the on-line marketplace at their leisure.

First-mover advantages are being identified by Internet start-up companies as the ability to establish customer relationships, study consumer habits and define market trends. The entrepreneurs have the added advantage of being flexible, the ability to react quickly, and dedication to making money on-line. Such advantages do not have as much significance for the majors. On-line customers would only amount to a tiny fraction of their retail sales at present. The key first-mover advantage for the major retailers is the need to have a reputation for innovation. It is, therefore, becoming standard practice for all organisations to have a Web site or at least an e-mail address. Customers soon will expect to be able to contact customer services and enquire about stock, even if they do not want to order on-line because of perceived security risks.

Mail order retailers are in a good position to enter the on-line market, as they already have the systems in place for order fulfilment. They also save on printing and distributing catalogues and are likely to become involved in ‘data mining’ to track customers and personalise shopping to them. However, the on-line market still lacks a substantial customer base. Although it appears to have many attractive features for businesses, Internet entry requirements are still too costly to attract widespread consumer demand.

Despite the costs required to set up a Web site being minimal relative to a physical store, there are problems for both large and small companies in going on-line. The small companies need capital to invest in advertising, Web site design, search facilities and links to other sites, whilst the large companies suffer from problems of an organisational nature relating to order fulfilment and setting up an up-to-date database of products. There are also problems related to pricing. Customers would be irritated if CD prices at Virgin Megastores on-line were more expensive than in the same chain in London. Prices of CDs on-line are currently not much lower than in the stores. Value may be added to the products in a virtual store by provision of better information in the form of other customers’ views, sound bites, information about the artists, etc. Pricing structures are threatened by the Internet because it gives retailers access to a global marketplace while retaining their presence in local markets. Record companies are also inhibited from exploiting the main advantage offered by the Internet, i.e. undercutting retailers on price, because they need the retailers to distribute their products to a wider audience.

Most of the music companies that participated in this study were not concerned about security or payment methods, despite the attention these issues have received from the media. Consumer concerns about security are widely believed to be slowing the growth of electronic commerce. If customers do not believe that their communications and data are secure and protected against interception or modification, they will be unlikely to use the Internet on a routine basis for shopping.

There are different perceptions as to who the first-movers in the music business are. Virgin Entertainment Direct perceives itself as a first mover in a bid to protect its innovative image. Retailer X, at a similar stage of development, believed that it was lagging behind the American companies and

Internet start-ups. Although there is evidence to suggest that at least one of the major retailers in the UK will be opening a fully transactional on-line retail outlet in the near future, the major players seem to be suffering from inertia relative to their US counterparts. This is partly due to lack of demand but also to delays in updating business processes and preparing for order fulfilment. Self-protection by the record companies is another probable reason for the inertia of the UK music business in developing innovative communication technologies and services.

The barriers to the electronic distribution of music are commonly thought to be technological. However, as higher capacity networks are installed, a more significant barrier may emerge. The record companies may be reluctant to become involved in the digital transmission of music because of its implications for the firms concerned with the manufacture and distribution of physical products (currently CDs, cassettes and vinyls). Failure to confront this issue may do more harm than good in the long term because electronic distribution opens up the market to global competition and potentially to other players that have developed a technological lead.

In the future, even if the on-line music business takes off, it is unlikely that a band will be able to promote a new hit song entirely through the Internet. Radio broadcasting, television advertising and other media are also important in attracting listeners. For this reason, artists will need the support of a record producer for production, access to recording studios, video construction and promotion. The functions of the different players may change in the future. For example, the record companies may abandon manufacturing and distribution functions and specialise in production and promotion. Alternatively, the major retailers may take over entrepreneurs to run their on-line businesses for them. Whatever happens, in order to defend their market share from increasing global competition, the major players in the UK music business and other companies in Europe will eventually have to adapt to the changing needs of the Internet economy.

The analysis in this working paper refers to first-mover advantages in relation to UK companies, rather than to advantages in relation to the world market. The Internet represents a global marketplace and a comprehensive analysis is needed of the strategies of firms based in continental Europe and the United States to draw conclusions about whether the European based firms will compete effectively with companies from the United States and Japan.

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Internet Book Shop

Amazon	http://www.amazon.com

Internet Music Shops

CDNow	http://www.cdnow.com
Cerberus Digital Jukebox	http://www.cdj.co.uk
Music Stop	http://www.music-stop.co.uk
The Internet Music & Video Shop	http://www.musicshop.co.uk
Tower Records	http://www.towerrecords.com

Annex 1: Identification of Interviewees

An article in *Internet World*[1] reviewed Music Stop, a small independent music company with two stores in Bristol; an article in *Music Week*[1] detailed information about the Internet Music Shop, a 'New age' retailer. Both of these companies were contacted and interviewed.

The major record retailers were contacted. The Internet activities of the W H Smith Group were found to be strategically focused on the Virgin name (Virgin Retail is now a subsidiary of the W H Smith Group) and Virgin Entertainment Direct were contacted accordingly. Another major record retailer wished to remain anonymous but agreed to co-operate. Woolworths was contacted but refused to participate in this study: the response of the Public Relations department being that it was company policy not to participate in any questionnaires or surveys.

Company size had a significant effect on the availability of suitable interviewees who were likely to have insight into the relevant issues. For example the marketing co-ordinator interviewed at Virgin Entertainment Direct was unable to answer detailed questions relating to the company's marketing strategy, and more senior personnel were unavailable for questioning. In contrast, the Partner of Music Stop, a small company in Bristol, was the only person involved in the company's Internet project and was happy to talk very openly about their marketing strategy.

The final steps in the company selection process involved contacting the major record companies, a mail-order retailer and two sources of background information: a media lawyer who was consulted about copyright and licensing issues, and a musician and Internet enthusiast who provided information about the current state of the technology for the electronic delivery of music.

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