The Economics of Music Production

The Narrow Paths for Record Companies to Enter the Digital Era (*)

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Abstract: On the basis of an in depth analysis of the flow of revenues within the music industry and of the emerging practices, we attempt to understand the logic at play in the current evolution of the structure of the industry. We claim that the record companies used to play a role that was useful for the dynamic and for the quality of music production, and analyze whether it can be maintained despite the impossibility for them to further control the formation and distribution of revenues generated by recorded music. Two antagonistic strategies, corresponding to different segments of the market, are highlighted in this paper. One targets the mass market and relies on the recognition by the on-line distributors of the mutual dependency between them and the record companies. It also admits that this music is characterized by short commercial life cycles and that it should be marketed as a consumer product. Moreover revenues are not necessarily generated by sales, but by the value of temporally exclusive release in some channels. The second model targets the wide number of niches at the fringe of this mass market and relies on the building of communities of customers sharing common tastes and values and on the development of their loyalty. The model is commercial, but relies clearly on the cooperation among the various stakeholders that build a common safe harbor enabling specific types of music to sustainably develop. Value added services funded by subscription have to be developed.

Key words: economics of culture, cultural industries, digital business model, P2P, industrial organization.

The collapse of the sales of music records and the dramatic rise of on-line downloads of digital files - of which the vast majority is based on file sharing - has been generating a considerable anxiety in the music industry and in cultural circles since the beginning 2000's. Campaigns of

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communication and lobbying have been organized. Bills have been passed. Public debates are on going. The dominant opinion within the ruling elites, in the press, and in the population over 40 is that everything that is possible should be done to restore the ability of record companies to control the circulation of recorded music as was the case before the development of the Internet and of the digital music technologies. According to most, this is the only way to guarantee the remuneration of artists and music producers. The youth, groups of activists and a few academics who have been elaborating the economics of free/open digital goods since the mid 1990's contest this vision. To put it shortly, these (mostly) economists point out the controversial impact of intellectual property rights on the efficiency of production and distribution of works of creation (whether it is works of authorship or innovation). They also insist on the opportunities opened by digital technologies by bringing cost of reproduction and distribution to almost zero, and by boosting the capabilities of sophisticated and wide scale systems of cooperation that save transactions costs while limiting fee-riding. They therefore call for the development of new models of production and distribution of digital goods (see CHANTEPIE & LEDIBERDER, 2004; CURIEN & MOREAU, 2006 for syntheses).

The public debate remains quite fuzzy. The often put forward argument is that the collapse of CDs sales which is not compensated by the development of charged download, deprive the music industry of substantial revenues, which, by the end, will impact significantly on artists' wealth, then on the dynamics of creation. Since music is a cultural good, generally associated with very positive social values by the vast majority of the population (as compared to other forms of arts which have a more "elitist" image), this threat is considered as of major collective concern. The new models "highlighted" by the supporters of digital-goods-sharing remaining marginal, many of their arguments are considered as utopia. There is little proof that an alternative to the traditional pay-per-listening (of for a right to listen in certain conditions) could be sustainable for guaranteeing music creation, which implies maintaining diversity, dynamism and innovation.

It is important to point out that the debates became central in most western countries not only because it is a question of a cultural good. This is also due to the strong role played by the government and by the legal framework in the organization of the industry. The invention and development of recorded music turned the music market into a mass market. Not only music became available to the vast majority of the populations, but also the ways it is enjoyed/consumed multiplied. It resulted in the necessity for those involved in the production to mutually organize to claim for rights of remuneration to all forms of indirect exploitation of music, and to manage collection and distribution of the related revenues. Moreover, the necessity to record music, to manufacture discs and to distribute them - which activities are characterized by fixed costs - led to the development of a set of central players controlling bottlenecks. In reaction, many stakeholders organized themselves into lobbies to balance the market power of these dominant players, and got from governments recognition of rights aimed at guaranteeing better bargaining positions. Also, in many countries, mutual societies and unions enabled the artists to collectively bargain with the "majors" under the shadow of the cultural authorities. Thus, the volume of revenues to be distributed among stakeholders and this distribution are strongly influenced by the government, the parliament and the judiciary. Groups of interests have strong incentives to push forward their viewpoint and to get the support of the opinion to try to influence the de factor "regulators" of the industry.

This paper aims at contributing to the clarification of the debate. It draws mainly from an in depth case study of the French music industry (BROUSSEAU & FELEZIAK, 2006). The goal of this study was twofold. First, it was aimed at making clearer the structure of revenues of the different stakeholders in the industry. Indeed, if the sales of recorded music are falling, other "markets" - and in particular live music - are developing. The issue was therefore to better understand who is impacted and how, by the observed evolutions. This leads to point out that the only category which sources of revenues are really threatened are the record companies. Their business format has been historically based on the sales of records, while they were delivering a wide set of services to the artists and to the public, including the subsidization of new talents or artists with small audiences by best sellers. As long as the sales of records remained flourishing, these players did not manage to get revenues from these services and did not seek for additional sources of revenues (e.g. management of concerts). Their shrinking revenues leads to analyze whether these players are still useful; i.e. whether the services they were delivering are still needed, and if so who can deliver. Since record companies accumulated unique skills in helping artists to meet their audience, it is also relevant to question their strategic ability to develop new business formats on this basis.

This paper is therefore a contribution to the analysis of the on-going evolution of the music industry. On the basis of observable trends, based both on the identification of flows of revenues and on case studies on various record companies and their partners/competitors' business strategies, it highlights that record companies are losing their ability to organize the industry to the benefit of on-line service providers and of digital devices manufacturers. However, part of them can become the business partners of these digital giants, because the latter need their skill in managing artists and influencing the public. Moreover, other business formats oriented toward servicing communities around specific types of music could be adopted by other record companies.

The 1st Section highlights the structure of revenues of the various participants in the music industry. It is based on the case of France. Indeed the specific organization of the music industry in each country makes it difficult to aggregate figures on a global level. Moreover, due to the multiplicity and diversity of stakeholders, various types of information should be compiled. The 2nd Section analyzes the way the digitalization of music is actually changing the logic of the industry. The 3rd Section points out the narrow paths along which record companies could envisage surviving. The last Section briefly concludes.

■ The structure of revenues in the music industry

According to the international association of record companies (IFPI) the sales of CDs has been permanently falling since 2001. The development of on-line sales of digital music does not compensate, neither in volume, nor in value, for the collapse of the CDs market. On line sales account only for 5% of global sales worldwide (9% in the US, 2% in France). It is essential, however, to point out that the sales of recorded music is far from being the only source of revenue. Various forms of public performance and of broadcasting also play a strong role. Live music accounts for almost a quarter of the total sales of the industry. Moreover, the revenues of live music are increasing at a significant rate. Between 2000 and 2005 they were multiplied by almost two in the US followed a similar trend in France. Such a trend is also observable on a wide set of niche markets ("ordered" music for soundtrack, for ambiance, for jingles, etc.), background music in (keep) public spaces, teaching and all activities linked to the music as a hobby.

To better frame the debate on the impact of the collapse of the sales of CDs, we attempted to assess the flows of revenues that benefited to all stakeholders in the year 2005 in France. This is synthesized in table 1 [1]. We really focused on the music market. Hence the revenues derived from the sales of derived products, from the reselling of the public image of artists, or from spare time activities (e.g. teaching), are not accounted for. They however can play a strong role in the structure of revenues of some categories of artists, whether stars or semi-amateurs. We also did not take into consideration the wages that can be earned by many stakeholders in the music industry, whether they are high school teachers, employed on a non-artistic position in the entertainment industry, etc. Our assessment is based therefore on two main markets: recorded music and performing arts. There are three majors sources of revenues: the sales of recorded music, the royalties paid by music users to authors and other stakeholders involved in the production of music, the compensation obtained by musicians when they are unemployed. Indeed, France is characterized by a specific unemployment scheme benefitting all artists involved in the performing arts due to the part time employment contract inherent to this activity. This heavily publicly subsidized compensation regime is considered as the mean to maintain a population of artists ensuring the cultural creation and a high level of cultural activities. Most royalties paid by music users to authors,

[1] Assessments are based on numerous heterogeneous sources: the annual reports of the main mutual societies responsible for managing the revenues derived from the "droit d'auteur" (in France, remuneration rights are recognized by the law to all stakeholders involved in the production of recorded music. The resulting flows of revenues are collectively managed - that is gathered and redistributed - by mutual societies established by the various stakeholders - authors, singers, musicians, producers, etc. The main societies are Sacem, Adami, Spedidam, SPPF, SCPP), the annual reports of the commission of the *Cour des Comptes* in charge of supervising these societies, the annual reports of the main record companies (Universal, Warner, Sony-BMG, Emi) and distributors (e.g. FNAC, Virgin), the annual reports and the figures provided by the various bodies in charge of the unemployment compensations for musicians (Caisse des Congés Spectacle, UNEDIC, ANPE; see also Guillot, 2005;), various reports occasionally or regularly produced by specialized institutes (Ministry of Culture (DEP), GEMAP, SNEP; Nicolas 2005, 2006; Amar and Koubi, 2004) and various interviews in the industry to get a better understanding of the sharing principles applied to sales and derived revenues (Abeille Musique, Harmonia Mundi, Virgin, Atmosphérique, Skyrock, Frémeaux et Ass., Ideal Audience, Music Web).
The crossing and comparison of these data enabled to produce the following assessments. They were triple checked. First, most single assesmment result from estimation derived from different sources. Second the overall consistency of the flows of revenues within the industry was analyzed. Third these data were compared to other studies attempting to proceed to comparable assessment (e.g. Curien and Moreau, 2006). Despite these checks, assessments remain open to discussion. The music industry remains characterized by the wide number and the diversity of the sources of revenues. Moreover, most of the revenues that are not collectively managed by mutual societies are hard to track and practices are quite heterogeneous. Lastly, the resulting aggregate should be interpreted with caution. Indeed, whether they are confirmed stars or half-benevolent, artist have quite contrasted levels and structures of remuneration. The same is true for record companies, for instance. Small specialized labels and majors operate very different business models.

musicians and producers are "collectively" managed in France. That is, the law establishes the level of royalties to be paid in various contexts by the users of music - whether they are radio stations, restaurants, discos, filmmakers, etc. - and mutual societies collect these revenues and redistribute them to those benefitting from right of remuneration. In addition to the "droit d'auteur" that recognizes copyright to authors and composers, the French law of 1982 recognizes specific rights to producers and performers. Lastly, those who sell music, either recorded or live, pay contractual fees to the various contributors to records or shows.

Table 1 - The Structure and Distribution of Revenues in the Music Industry in France in 2005

Millions of Euros	*Recorded Music*						*Live Music*
	Contractual Management					*Collective Management (2004)*	
	CD	*Video*	*Downloads*	*Rings*	***Total***		
Authors, Composers and Editors of Music	(92.9)	(5.3)	(0.9)	(8.2)	**(107.3)**	**538**	(68)
Performing Artists *Share of French*	91.3 *61.4*	3.9 *2.6*	0.5 *0.3*	2.8 *1.9*	**98.5** ***66.2***	**51**	**250** **+ 82 ***
Producers + Wholesale Distribution	395.9 + 193.4	55.8 +20.3	6.8	12.7	**471.2** **+213.7**	**46**	**290 ****
Retailers and On-line intermediaries	287.8	30.3	1.8	36.54	**356.4**	-	

(XX) Contribution of the various sources of mandatory royalties to the collective remuneration of authors
* Unemployment compensation ** Revenues of show and concert organizers

Altogether, the sales of (recorded and live) music account for 1,647.50 M€ in 2005. The collectively managed royalties are estimated at 635 M€ in 2004. And the compensation for unemployment account for 82 M€. A significant share of the sales of recorded music goes to the marketing channels, while most of the sales of live music are shared between those really involved in the production of music. Indeed, concerts play a strong role in the ability of performing artists to get revenues, and live music is a breeding ground and a training field for young artists.

Record companies usually integrate part of the distribution channel. They are both recorded music producers and wholesalers. As it will be explained later, in the past, this business format enabled them to control value extraction in the value chain and therefore to get enough revenue to subsidize the low selling artists thanks to hits. It is also essential to keep in mind that the recorded music producers are different from the show producers.

Sales of recorded music generate 751.4 M€ of revenue to be shared between those involved in the production of music (authors, performers, producers). The same categories benefit from 460 M€ of net contribution[2] to their activities of (collectively managed) revenue drawing from the various professional and indirect uses of recorded music. Live music yields 540 M€ of sales plus 82 M€ of unemployment compensation. To put it another way, sales of recorded music account for about 41% of the revenues of the three categories of players participating to the production of music. While this source of revenues is decreasing, the two other sources are progressing. Indirect revenues collected by the French mutual companies grew by 9% between 2002 and 2004 and the live music market grew by 35% in the same period [3] (see also, KRUEGER, 2005; CURIEN & MOREAU, 2006; BOURREAU & GENSOLEN, 2006). As pointed out by several academics commenting the "crisis" of the music industry, the fall of the sales of CDs, while an issue for the music industry, is not necessarily a vital one for musical creation and live music.

It is essential to point out, however, that the various sources of revenues do not account for the same share of the total revenues of the various stakeholders; hence strong differences in perception of the collapse of the CD market. Revenues from authors and composers are almost fully managed thanks to collective management. Sales of CDs contribute only up to 17% of these revenues. Performers get most of their revenues from live music. According to our assessment, it accounts for almost 75% of their revenue (with a quarter provided through unemployment compensation). Thus recorded music accounts for only 25% of their revenue, 43% of which being related to mutually managed royalties. Thus, all in all, sales of CDs are only minor contributors to the revenues of singers and musicians; approximately at a 15% level. Lastly, production as a whole gets its revenue up to 46.1% from the sales of CDs, and up to 20.9% from the wholesale

[2] Indeed, collectively managed royalties account for 567 M€, but sales of music generate collectively managed fees for the authors that should not be double counted here.

[3] The total sales of live music are very difficult to assess in France due to the high diversity of the organizations involved in music shows. Beside concert halls and tour organizers, there is a wide number of public institutions and non-for profit organizations. Sales are estimated on the basis of the revenues collected by the mutual company in charge of the interests of authors and composers (SACEM).

sales of the same CDs. Indirect revenue from mandatory royalties represents 4.5% of these revenues. Live music generates 28.4 % of the revenue of producers. However, record companies and show producers have totally different business formats and are not integrated. Thus the sales of recorded music (mostly CDs) represent in reality around 94 % of the revenues of record companies; sometimes a bit less when they have a department or a subsidiary responsible for the production of music shows. On the contrary, the revenues of the producers of shows and concerts are fully and exclusively generated by sales and grants linked to their core business.

These figures clearly illustrate the actual issue raised by the fall of the sales of CDs. Music producers' survival is questioned, while the other category of players seems to be able to easily compensate the losses due to the dropping music sales. Especially because the bases of their revenues - mandatory royalties for the uses of recorded music and musical show business - are growing. It is also worth noting that in the present days, where most of the sales of recorded music are still based on CDs, retailers and the state (through VAT) capture more than 60% of the gross revenue generated by music. These various figures point out therefore that there are margins for reorganizing the flows of revenues between the various players in the value chain, if needed.

■ Toward a new organization of the music industry

The shrinking ability of record companies to gather revenues and to organize the industry

Record companies have been playing a central role in the music industry since the 1960's. Together with the consumer electronic manufacturers they boosted the development of a mass market for recorded music (LABARTHE-PIOL, 2005; CURIEN & MOREAU, 2006). On its side, the consumer electronic industry has been permanently inventing new technologies that decrease the costs, enhance the quality and diversify the capability to play music. This has been generating new habits; in particular the permanence and the ubiquity of access to music. On their side, record companies have been playing an active role in the enrichment and segmentation of the supply of recorded music. In response to a strong demand for contents, record companies have been developing specific methods to "develop" and "market" new artists. Music being a strong vector of social distinction record companies had to respond to the increasing number of niches that came with the individualization and fragmentation of the society in multiple communities (based on generation, social milieu, ethnic origin, etc.). They became experts in identifying new trends, spotting potential artists, training them to respond to demand, providing them with the infrastructure and means to issue work meeting demand, advising them to manage their career, etc.

Record companies were able to play this role because of the fixed cost structure of the industry. The production of masters - the initial record - and the establishment of fame require important investments. These investments became even higher with the technological development - i.e. the progress toward hi-fi that, together with the development of the skill of the audience, has been requesting a permanent enhancement of the quality of the masters, orchestration, execution, etc. - and with the massification of the music market; the audience to reach becoming larger and the competition due to the winners take all nature of the competition becoming harsher. This increasing fixed cost economy enabled record companies to become central in the value chain (GRONOW, 1983; ALEXANDER, 1994; LABARTHE-PIOL, 2005).

However, the distribution of physical support remains quite a costly activity. Record companies played an active role in bringing these (marginal) costs down by encouraging the concentration of demand on a reduced number of artists/records and by accelerating turnover (VARIAN, SHAPIRO & FARRELL, 2006). They did so by strengthening the promotion of artists - especially by developing cooperative links with the mass media systems and by investing in communication and advertising means - and by taking control of the distribution; hence the investments of majors in wholesaling (BOURREAU & GENSOLLEN, 2006; CURIEN & MOREAU, 2006). That is why major companies are providing today an integrated package of services to artists. Beside the production of masters, they ensure the development of their career, the management of their communication, the pressing and the distribution of their records.

The strategy followed by the record companies contributed to reinforce the star system, which is in any case inherent to cultural industries (BENHAMOU, 2002). In the same time, because demand is hard to control and to forecast, the record companies played an ambiguous role in the matter of supply of diversity. Indeed they relied on the huge benefits obtained from stars and hits to subsidize a wide set of low selling artists. On the one hand, pure marketing logic is at play. All the specialists of the industry know that it is very hard to forecast the success of an artist. There are also ups and downs during a career. Record companies had to maintain breeding ground to ensure a minimal level of commercial success. The necessity to subsidize low selling artists is also a strategic necessity in a competitive environment where new fashions can rise quicky. On the other hand, many managers in artistic industries have, beside their marketing and financial orientation, a patronage logic. Either for prestige or because they have beliefs and preferences, they consider it essential to support low selling but talented artists. In any case, this necessity to organize cross-subsidization among artists was also one driver of the integration of several activities in record companies.

This logic of the organization of the industry changed drastically with digitization and the rise of on-line distribution. The resulting changes have however to be qualified (CHANTEPIE & LEDIBERDER, 2005; BROUSSEAU & FELEZIAK, 2006). Indeed, it is often argued that digital networks are pushing most costs down. First, the costs of production of masters are not significantly decreasing. While demonstration records can be produced cheaply, professional quality masters still required high tech studios and, above all, highly specialized production teams. Second, promotion costs remain high because on-line exposition is not sufficient. Search costs are high on the Internet due to the numbers and wide range in quality of the displayed material. All the available studies point out that promotion costs represent 20 to 25% of the price of a CD. That is a higher share than the costs of production (BOURREAU & GENSOLLEN, 2006). Indeed, advertising, access to media, communication campaigns remain necessary to promote artists. Third, while reproduction and transmission costs of a digital sequence tend to zero, the cost of secured distribution are far from being negligible. If one refers to the price charged by on-line retailers, distribution cost for a 0.99 € file are roughly 0.15 € [4].

So, while the economics of music is evolving, it is not dramatically changing. Record producers, as intermediaries between the supply and the demand are still necessary. Indeed, they have been developing actual and strong artistic and marketing capabilities enabling artists to develop their talent and to meet their public. In addition, as entrepreneurs, they hold

[4] Costs of distribution by a traditional retailer are 0.35 €, which represent 29.8% of the price before tax. Thus on line distribution is indeed cheaper, but not free.

"industrial" and commercial risks and provide cash in advance. The main problem is obviously that with the development of digital networks and associated practices of file sharing, they are no longer able to secure their revenues (BOORSTIN, 2004; BOURREAU & GENSOLLEN, 2006; MARTIN, 2004, 2006). They are consequently losing their capacity to play their traditional role of cross subsidization platform between stars and low selling artists, which threatens their business models since it is core in their ability to identify and develop artists… and moreover to maintain a breeding ground.

At first sight, record companies have three solutions to recover revenues. First, they could call for recognition of their role by calling for an extension of their "neighborhood" rights. Indeed, recorded music adds a lot of value to many activities. In particular, the attractiveness of digital networks is partly due to the availability of free music. It would be therefore justified to extend the logic of mandatory royalties and to increase the share of the producer of music. However, as highlighted in table 1, the potential losses of revenues of music producers are roughly 680 M€, while the total net revenues of the collective management is 460 M€. It is clear that such "solution" is far from being implementable. Moreover, the logic of the entrepreneurial role of the music producers, which will no longer benefit from a link between the success of the artists and their revenues would disappear. It would have a strong impact upon their incentives to efficiently identify, train and promote performers. Second, record companies could integrate activities, like the show business, which are developing. With shrinking revenues, record companies have however little capability to grow internally or externally. Moreover, many segments of the live music market are poorly profitable and are operated by non-for-profit organizations. Concerts will hardly compensate for losses of CDs revenues. Majors are nevertheless attempting to consolidate their ability to get revenues from all indirect uses of music. They do so by reinforcing their position as editors of music. They are currently actively buying back catalogs of works that they intend to valorize as editors. These catalogs are then exploited under '360°' model consisting in multiplying the sources of revenues (merchandising, live mobile, clips, etc.). In the same time the current revenues drawn from the musical edition are a tenth of the revenue drawn from the recorded music, and majors are already controlling 65% of the global market. Edition will also hardly compensate for the losses of revenue linked to the reduced sales of CDs. The last solution is to develop a new business model recognizing the platform role of the record companies between the artists seeking to develop fame and access to audiences, and the various users of music calling for contents. "Virtual labels" are developed by record companies to change their relationship with the artists. Instead of signing "artist contracts" with them, by which commercial risks and costs of development and of promotion are borne by the producers, service providing contracts are proposed. Artists remain the owner of the master record, and pay for the various services provided by the "virtual label". Given the limited wealth of most artists and the star economy, this model is obviously hardly sustainable. Only confirmed stars have the ability to accept these kinds of contracts, while in the same time they remain the only potential sources of subsidization of low selling artists for music producers.

New business models have therefore to explore new sources of potential revenues if producers of recorded music want to continue to play their role of "go between" for artists and their audience.

On-line distribution platforms: friend or foe?

Incumbents did not transform the organization of the music industry in place for the last 50-60 years. In particular, authors and performers did not change their "business format" with the rise of digital technologies. While it is technically possible to self-produce a record and to distribute it on-line, there are only a dozen significant examples of this being done by recognized artists bypassing the record companies and the established marketing channels. As pointed out above, a high-quality master and a secured distribution system are costly. Moreover, exposition in the media is difficult to manage. The famous example of the Arctic Monkeys is in fact misleading. Indeed this band became famous thanks to the free distribution of its albums and benefitted from a strong "buzz" on the Internet and in the media. It then signed a very standard contract with the label Domino and embraced the traditional business format. Also there are only a few examples of free/open-source music communities. The pure distribution channels constituted by the file sharing systems, do not organize a remuneration of artist and music producers. They are therefore more tolerated than supported by those involved in the production of music. When production is taken into consideration, the sustainability of free music is in question. They are few on-line free/open-source music communities. Most of them distribute the produced music for free and target amateurs (BROUSSEAU & FELEZIAK, 2006). A few, such as Jamendo or Dogmazic.net, attempt to call for responsibility of the audience by requesting voluntary contributions (as in the shareware model). At this point, there are not as it is the case in the software industry (cf. LERNER & TIROLE, 2002), associated markets for services of active sponsors that would (directly or indirectly) remunerate contributors and allow sustaining of a significant production. At best, contributors can hope to reach fame and to "be signed" by a major, but the low audience of the existing communities do not encourage this strategy as compared to those targeting traditional circuits: concerts and mass media. While "ideologically" significant, these models remain "emergent" and did not destabilize at all the core music business.

What really destabilized the industry is the entry of new players that have been promoting digital and on-line music. It has to be reminded, however, that these entries are not a historical exception (LABARTHE-PIOL, 2005). The providers of recording/execution technologies have always been playing a strong role in the music industry. They entered in the "production of content" business each time it was needed, in particular to develop new markets. Sony and Philips, for instance, are good examples. But there are dozens of others. Today, on-line distributors and manufacturers of consumer electronic products (including computers) are the major new entrants in the industry. They have two major characteristics. First, their size is much larger than that of the players in the music industry: in 2003, the global sales of the telecommunication industry and of the computer industry reached, respectively, 1,555 and 1,747 billion USD, while the recording industry total sales were 38 billion USD. Second, they are highly diversified, and the music market is one of the numerous content markets they can reach and they have to deal with.

They thus have a tremendous financial capacity and a real ability to cross-subsidize activities. In particular they can use music as a loss leader, their goal being to make profits on the selling of traffic or electronic device. They face ,however, two constraints. First, their core business and their main know-how remain network administration or computer design and manufacturing. They have little incentive to invest a lot in the risky and low profitable business of music production (and in all the segments of the entertainment industry). Since in the same time, the dynamic of the production of contents is essential to sustain the sales of their services and products, they have strong incentives to support record companies. Second, they are often submitted to significant anti-trust pressures. It can have two contradictory effects. On the one hand, it can reduce their profitability on their core market, and therefore push them to reinforce predatory practices on fringe markets like music. On the other hand, oversight by antitrust authorities can lead them to reduce their propensity to capture rents from their providers.

Strategies of new entrants are differing in function of their nature. The main players are the consumer electronic manufacturers (which include computer manufacturers), the mobile operators and the Internet Service Providers (ISP), as well as some dominant digital service providers. Consumer electronic companies seek to develop the digital music market on the basis of their technical standards - including in particular their own Digital Right Management (DRM) technology - both to sell their technical platforms (both players and servers) and to license their technology to third part (on-line retailers, other consumer electronic manufacturers, etc.). Two players dominate the market - Apple and Sony - and they are clearly involved in a standards race (with, for instance, alliance between Hewlett Packard and Apple, and between Dell, Musicmatch and Sony). Mobile operators are considering music as one of the types of content that can boost their supply of broadband services. It enables them, in particular, to target the young audience and to encourage the adoption of multimedia terminals that would further support the development of additional services. Music is clearly a loss leader product. In the same time, mobile operators need to cooperate with the actors of the music industry to develop new and innovative services justifying on-line access to music as compared to portable music. Also, they have to differentiate among each other and to develop exclusivity services. The streaming of concerts or the early release of albums are two of the strategies that have been explored. Music is however one of the multiple dimensions of the packages they need to develop which include news, video on demand, games, advanced services, etc.). ISPs, Portals and Search Engines are also important players. All have interest in assembling services either for a fee or on a free basis (BROUSSEAU & PÉNARD, 2007, 2009). ISPs, as mobile operators, can rely on exclusive services to differentiate. Portals and search engines, like Yahoo! or Google develop package of services aimed at maximizing audience and extracting data relevant for marketing. In that context, while most of these players did not make significant moves up to this point, they could enter the music distribution market and play an important role.

The strength of the new entrants is both a threat and a source of hope for the incumbent firm in the music industry. On the one hand they can extract most of the rent that benefitted the music record companies until the rise of on-line distribution. On the other hand the new entrants realize that they are about to dry up the source of a flow of contents that yield part of their revenues and profits. The "winner takes all" nature of the competition on digital networks can place the future dominant distribution platforms in the position occupied in the past by record companies. If one admits that the

80/20 law according to which 20% of the production generates 80% of the sales - and that 90% of the profits comes from 10% of the production; Benhamou, 2002 - will remain the iron law of cultural industries, then dominant players will have to continue in the future to organize cross-subsidization among artists. Digital distributors can play this role (CURIEN & MOREAU, 2007). They can also leave it to the existing recorded music producers since they have the know how. It would mean the development of new commercial practices between music producers and on-line distributors enabling the former to yield enough revenue to continue to "develop" artists and maintain a breeding ground.

The harsh competition to become the dominant distribution platform in the short term is both an opportunity and a threat for the development of these new formats. On the one hand incentives to buy or gain access to large catalogs at low price are strong, since it is a necessary condition to become a single counter in the middle of the market. On the other hand, digital platforms have interest in benefitting from exclusive access to certain artists and catalogs. It opens perspectives of more balanced and more cooperative relationships with record companies and music editors.

■ Toward two models for music production?

The rise of on-line digital distribution has been impacting deeply the ability of record companies to collect revenues. They are therefore experimenting new practices. Some of them have already been discussed above and seem unable to restore the capability to cross-subsidize and develop artists. Most of these unsustainable solutions seek for a restoration, while the "basic conditions" of the activity have changed. Other strategies are precisely based new opportunities opened by these changes. Moreover, it is worth noting that the collapse of the "record" based model is not only due to the digitization and "on-linazation" of music. Also the statute of music in society has evolved, with consequences for the propensity to pay for it. The new framework has to be understood.

Consumers attitude, propensity to pay, and diversification of behaviors

The low cost of diffusion and duplication of music, well before the digital area, induced its omnipresence in every area of life. Permanent and generalized access led to transform the perception of music by the audience. In many situations, music is not chosen. It is imposed as a component of the environment, often in the frame of marketing strategies. The combination of permanent access, with the known low cost of reproduction, with the huge profits made by some stars (and for a long period by recording companies), with the understood non-rival character of consumption, and with the assumption that most tunes generate indirect revenues, has been leading to a decrease in the the propensity to pay for (recorded) music. More precisely, consumers are discriminating among contexts. As pointed out by CONNOLLY & KRUEGER (2005) they have a higher propensity to pay for live music than in the past. In the matter of recorded music, they often establish a strong distinction between a request to access freely to a wide catalog to test and an agreement to pay for their favorite pieces and artists, especially if they can benefit from value added packages. Several studies also pointed out the reluctancy of several categories of consumers to pay for downloaded files on their computer, while they accept high prices for phone rings. There is clearly room for distributing music under different formats in function of the context; which is after all, a received practice in other segments of cultural industries. In particular, the motion picture industry pushed quite strongly the differentiation and the timing in the commercial exploitation of movies.

Two attitudes of consumers deserve to be mentioned here. First the propensity of consumers to accept advertising (or other forms of pollution) in exchange of free contents, and their potential preferences for bundled sales.

Funding music thanks to a valorization of audience has long been the model of the radio system. It started for music on demand with the Peer-to-Peer networks that were funded thanks to advertising. Up to this point, the capability to capture the attention of specific audiences and to valorize this ability to fund the production of music has been loosely exploited. It is however evolving. Vivendi Universal and EMI reached an agreement with two platforms - SpiralFrog and Deezer - that propose free streaming and free downloading in exchange of viewing commercial ads. Marketing surveys show that a share of users, especially younger ones, are ready to accept ads in exchange for reduced rate of free provision of on-line services. On the opposite other categories are ready to pay "premium" rates to get enhanced and advertising free services.

Digital technologies facilitate the implementation of price discrimination as discussed by SHAPIRO & VARIAN (1999). The combination of tracking and digital rights management technologies makes it possible at reasonable costs. These practices are however not well received by the users, who do not easily accept paying different prices for using the same piece of music on different platforms. Moreover DRM technologies are far from being fully reliable and unjustified default of compatibilities occur (PETRICK, 2004). Lack of legitimacy stimulates hacking of the protected pieces. The bundling of the distribution of digital music with other services, which exclusion is simpler to organize, is a good way to bypass this lack of legitimacy of price discrimination. As pointed out in standard microeconomic textbooks, bundling results also in price discrimination (SHAPIRO & VARIAN, 1999), and also prevents reselling/sharing among consumers. This is why one witnesses the development of packages of goods and services, which certain components like network access or technological devices are easy to secure.

These elements combine, first, to remind the central role that can be played by the on-line distributors. With the generalization of the distribution of dematerialized music, they will become the only parties able to manage access and gather revenues. Second, they show the narrowness of the path, since users will never accept either a return to a uniform price of access to recorded music - we just saw that their propensity to pay for music vary in context -,or what they judge as unacceptable practice; namely practicing standard price discrimination for the same file of digital music. The only discrimination they seem to accept is when digital files are not accessible in the same conditions and on the same platforms.

Depending on the type of music, two main strategies/business models seem to be available to music producers. The first one targets the core of a global mass market of popular music. The second one corresponds to specific types of music dedicated to specific communities at the fringe of the mass market.

Managing chronology on the mass market

The first model seeks to exploit the "transient nature of fame". It corresponds in a sense to a deepening of the model that has been dominating the recording industry for the last thirty years. It aims at capturing as soon as possible the most value from a "product" of which its commercial life will be short. Two reasons explain this. First, popular music is to a large extent based on a succession of fashions punctuating individual and collective lives. Hits are remembered for a long time, but bought only once.

Second, in the digital era, free copies are rapidly circulating on a wide scale, especially for more popular songs.

The strategy relies on two pillars. First, the massive selling of new release as quickly as possible. It is close to the model that is applied today to the most "marketed" products, like real TV outcomes, summer hits, and other marketing concepts (boy bands, models, etc.). It is only a systematization of this model and an extension to all artists. The model combines huge promotion campaigns with minimal DRMs to slow down the diffusion of copies. As compared to the present model, there is no way to manage sales in the long run. Once the launching period is over, no further sales are expected and catalogs generate only indirect revenues.

Short period of selling is combined with another strategy aimed at extracting as much consumer surplus as possible. The chronology of release can be cooperatively managed with on-line distributors (as was done with the early release on the Orange network of the single "Hang-up" by Madona in 2005). Contract of exclusivity can be settled. Some service providers can market bonuses and enriched versions.

It is easy to understand that this model is only available for a style of music that is targeting a wide audience. Moreover, because of the uncertainty of the success, on-line distributors have to understand the inevitability of failures and the minority of success and to adapt contractual practices and remuneration schemes accordingly. This call for long term cooperation between digital music distributors and recording companies, rather than *quid pro quo* spot exchange.

Exploiting niches relying on communities

Beside the above-described market of short-lived products with high turnover, the music market is characterized by the existence of multiple niches in which long-term relationships are established between the artists and the audience or around a type of music (jazz, classic, regional, ethic, etc.). The audience is much smaller, but stable. The Internet and digital technologies are a unique opportunity to reshape the performance of these niches and the music producer can play a role.

First, since these markets are characterized by small numbers, the dramatic reduction of fixed costs in the matter of distribution combined with the adequacy of on-line distribution with a dispersed population of customers makes it possible to distribute extended catalogs to fully exploit the "long tail" effect. A bunch of additional services can be provided: rich meta-data to easily retrieve specific interpretations, performances by specific musicians, etc.; specialized data-basis, newsletters, forums, etc. Related services, and in particular the organization of concerts, can be delivered in synergies. Several small specialized labels and music editors - like Abeille Music in France - have already developed such packages of specialized services that are clearly aimed at providing an audience with a portfolio of services among which production and commercial synergies exist.

Second, the web is already used by some artists to develop links with their audience. Confirmed stars as well as new comers rely on web site to display information and provide samples of their work. The trend is however clearly to develop interactivity. Beside these pure top-down information sites developed by artists, blogs, chat and community sites are relied upon to discuss work, signal new talents and accelerate word of mouth effects. This trend is in line with the success of on-line communities in which amateurs and semi-professionals share information and knowledge, and manage cooperations (GENSOLLEN, 2004, 2007; DANG N'GUYEN & PÉNARD, 2007). We already mentioned the most advanced practices in the matter of free music communities. The dominant practice remains however, the sharing of experience and discussions that maintain communities unified by common tastes. Small specialized editors could provide on-line services to develop and stabilize communities, and to favor interaction between the artists and their audience. This would clearly enrich their supply of service and develop customer loyalty.

Thus the second available model for recorded music producers is clearly based on logic of partnership with the artists and the audience. Beyond the traditional role of artist development, the idea is to help the demand to structure itself to constitute a strong niche with clear, recognized and stable cooperative relationships between the three parties. The cooperative logic of this model prevents free riding and the cannibalization of sales by circulation of free copies. The modest size of the community and the development of interactive relationship making tangible the relationships of mutual dependence, individuals should be more likely ready to contribute. Moreover, the provision of packages of services should favor the principle of subscription to unlimited access.

■ Concluding comments

On the basis of an in depth analysis of the flow of revenues within the music industry and of the emerging practices, we attempt to understand the logic at play in the current evolution of the structure of the industry. By contrast with several academic analyses that no longer see a future for record companies, we claim that the record companies used to play a role that was useful from the perspective of the dynamic and the quality of music production. This utility was twofold. First, it favored the meeting between the artists and their audience thanks to the development of artistic and marketing capabilities. Second, it ensured the development of artists and the maintaining of a breeding field thanks to a capability to cross subsidize artists; the latter drawing from the mastering of the flow of revenues. On-line distribution deprives these actors of this latter capacity and therefore of their ability to provide the "artistic" services provided in the past. The only solution for them to survive, and for the other stakeholders in the industry to continue to benefit from the provision of their services is to seal a new alliance. Two antagonistic directions, corresponding to different segments of the market, are highlighted. One targets the mass market and relies on the recognition by the on-line distributors of the mutual dependency between them and the record companies. It also admits that this music is characterized by short commercial life cycles and that it should be marketed as a consumer product. Moreover revenues are not necessarily generated by sales, but by the value of temporally exclusive release in some channels. The second model targets the wide number of niches at the margin of this mass market and relies on the building of a community sharing common tastes and values and on the development of its loyalty. The model is also commercial, but relies clearly on the cooperation among the various stakeholders that build a common safe harbor enabling specific types of music to sustainably develop. Value added services funded by subscription have to be developed.

These two models are clearly contrasted. However, as pointed out by BROUSSEAU AND PÉNARD (2007, 2009) the development of new business models in the digital industries, often relies on combination and hybridization between quite contrasted practices - free and paying distribution, community based and pure transactional interactions, etc. - and the actual models that will develop will probably try to combine the logic of the dynamic management of release in the short run with that of the value added and interactive services in the long run.

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