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Perpetuating sales: enabling incumbent survival of radical technological shifts

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Abstract

This paper examines an industry whose incumbents' specialised complimentary assets were their operations management and distribution channels. This advantage was seriously undermined by the advent of digital distribution. Radical technological change theories dictate that if incumbents in an industry without specialised complimentary assets will be replaced by entrants. This did not happen, and extant theories of incumbent survival do not explain why the incumbents remained dominant in the industry. We propose that survival is due to the unique industry characteristic of perpetuating sales. This paper will explain what is a perpetuating sales model and why does it enable incumbent survival?

Keywords: Incumbent survival, industry transition, specialised complimentary assets

Introduction

Technological change can either sustain the competencies of existing firms or destroy them (Bower and Christensen, 1995). When a new dominant technology is sustaining, it incentivises existing firms to invest and it sustains the current trajectory of the industry (Arrow, 1962). When a technology is radical, it requires firms to acquire new competencies, causes current competencies to lose their value and incentivises entrants to invest (Gilbert and Newbery, 1982; Teece 1986; Tripsas, 1997). Existing firms, who are often entrenched in the use and routines of their old technological trajectory, find it difficult to transition to the new technology and entrants who can more easily adapt to the new radical technology replace them in the industry (Tushman and Anderson, 1986; Christensen, 1997; Tripsas, 1997).

A body of literature has emerged, discussing how existing firms can prepare for such change and react to it once it occurs (Christensen, 1997; Jiang et al., 2010; Hess and Rothaermel, 2011; Tripsas, 1997; Tushman and Anderson, 1986). This literature has created exceptions where existing firms can survive these radical technological shifts. There are broadly three categories described in the incumbent survival literature- (i) specialized complimentary assets to the new technology that allow incumbents a competitive advantage on entrants. (ii) Strategic alliances with firms in different industries or different places in the supply stream that allows firms access to a wide array of competencies and (iii) R&D innovation which gives firms a wider frame of reference for new technologies.

Research Question

In this paper, we aim to add to the body of knowledge in the area of incumbent survival while also adding to our understanding of the broader theme of radical technological change. Currently, the main theories of incumbent survival of radical technological change state that it is physical and tangible assets, and intentional actions that allows survival to occur. We propose that incumbents can survive a radical technological shift by a perpetuation of sales in the industry, which is a characteristic that belongs to the industry as a whole and not to an individual incumbent, firm or firms. The phonographic (recorded music) industry is the research site for our study. In this industry, products can be perpetually popular with customers and therefore constantly bring revenue to firms in the industry. This phenomenon is unique to the industry itself and does not belong to any firm. Products can sell years after production and after the technological platform they had originally been released on was extinct.

Methodology

As this study is exploratory in nature, we chose a case study methodological approach. We used qualitative and quantitative data. We collected in-depth qualitative data from

12 executives in the phonographic industry. The data was collected via eight in-depth interviews and transcription of four keynote speeches. Non-participant observation and participant observation was conducted with a further 40 industry insiders. We collected the qualitative data in two phases at music industry conferences: The PopKomm Music Conference in Berlin and The Hard Working Class Heroes conference in Dublin. We also used industry reports and press releases from 2000 to 2012.

The quantitative data was collected from The International Federation of the Phonographic Industry (IFPI) as well as national representative bodies for the two largest recorded music markets- the UK and the USA. We collected sales data from Nielsen Soundscan. We conducted statistical correlation tests on overall sales versus catalog sales. Variance in change of different sections such as digital sales, physical sales, new sales and catalog sales were examined over a 15-year period. We were particularly interested in catalogue sales versus new sales and the change in market share for incumbent firms versus entrants in the same period.

Main Findings

Until the 1980s, there was a lot of fragmentation in the phonographic industry. In 1987, a "Big 6" group of companies emerged which owned around 85% of the market. After this development, people in the industry began using the term *major label* to describe these large organizations with the term *indie* (independent) labels for those outside of this bracket. This "Big 6" was comprised of EMI (Electrical Music Industries) based in London, CBS (Columbia Broadcasting Services) which dated back to the 1890s, BMG (Bertelsmann Music Group), Polygram, Warner Entertainment Artists (WEA) and Music Corporation of America (MCA). In 1991, Japan's Sony group (SME), who wanted to complement its Walkman products, bought out CBS, and MCA became Universal Records. In 1998, Polygram merged into Universal and in 2004; Sony bought out BMG to make Sony BMG. Until 2011, it was a "Big 4" with Sony BMG, EMI, Warner Music Group (WMG) and Universal Music (UM) controlling around 85% of the recorded music market globally (Kraslovsky et al, 2007). In 2011, WMG and Universal proposed a buyout of the owners of EMI, Citi Group, who had serious financing issues. In late 2012, EMI transferred 3% of its holdings to Universal.

There have been several technological changes in the phonographic industry. However, each change up to digital downloading was not radical as they did not change routines or boundaries and built on existing competencies of the established firms' marketing, distribution and production.

The CEO of 7Digital, the second largest digital music sales company in the world, gave an insight into the sustaining nature of the recorded music industry up until the advent of digital music. The CD was a major change but the incumbent firms and their large customers (the retail outlets) in the market supported it. As the above respondent alluded to, the technologies used in the phonographic industry prior to digital music

were a continuation of the same trajectory. The industry used the same distribution networks, the same retail partners such as HMV and Tower who simply replaced a product using the old technology on their shelves with the new technology.

> We had the Gramophone, and then we had the 8-track, which was popular in the states and was the first technology that could be played in a car. Then we had the good old cassette player...we had the CD and this was the golden years for the record companies as they could reissue everything on CD and they made huge profits... I think people in the industry thought this replacement cycle would continue forever and they would bring out new technology and start the cycle again. As we know now, unfortunately, that did not happen. (CEO, 7Digital, 2nd largest global digital music provider)

This system changed once the digital distribution of music started at the beginning of the millennium. Physical sales have decreased year on year since overall sales peaked in 2004. Physical album sales have fallen from 606.2 million units in 2005 to 198 million units in 2012. Whereas digital albums have increased from 30 million units in 2005 year on year to 252 million units (this figure includes individual track sales equalized at 10 tracks per album) in 2012. The major labels were and still are the only producers and distributors of physical music. This was one of their main specialised complimentary assets. The physical distribution channels where the incumbent firms had their power have lost a large amount of their value as the amount of units shipped through this channel reduced greatly.

Coinciding with the new digital music technology was the advent of music blogs and social media that advised consumers of new tastes. This was important as it took another facet of the record companies' control mechanisms away from them. A music blog manager explained that prior to the advent of blogs; consumers discovered music through the traditional press and radio. Blogs allowed the consumer to ignore the mechanisms by which the record companies asserted their control.

Before the advent of blogs, especially in America, record companies controlled what was put into record stores and what was played on the radio. Then it all changed and all of a sudden, record companies did not dictate the way new music was discovered. There was this new means of discovery on the Internet, the music blogs. Instead of trying to embrace this just like Napster they tried to shut it down. (Online manager, The Hype Machine, the World's largest blog)

The way people found music had changed and the arrival of websites such as MySpace and YouTube allowed artists' access to consumers directly. All the artists had to do was to upload their music on to these or similar sites and let the consumers find them. Popular media referred to this phenomenon as the democratisation of music, as the consumer and artist needed no intermediary to reach each other.

Tripsas (1997) stated that if a firm lost specialized complementary assets in a period of radical technological change, then an entrant firm would displace them. In the phonographic industry, the new technology clearly depleted the specialised assets of promotion and distribution of the four incumbent firms- Universal (UMG), Sony (SMG), Warner (WMG) and EMI. There has been a 75% reduction in the distribution of

physical products in 10 years. As regards promotion, a Nielsen market research survey (2011), of 26,644 consumers has found that consumption of music is now very fragmented and that 50% of consumers watched music videos online. Prior to the online explosion of content, consumers could only find music in record shops, the radio and music channels on television. The record labels fully controlled these channels. Considering the extant explanations regarding radical technological change, this change should have badly affected the incumbent firms in the industry, given that their structures and specialized complementary assets were devalued (Teece et al, 1997). However, their market share overall, in digital sales, analog sales, current sales and catalogue sales have remained relatively constant as figure demonstrates. The average variance for the four firms' market share added together year on year over an 8-year period is less than 1%. No entrant has managed to displace the incumbents in the industry.

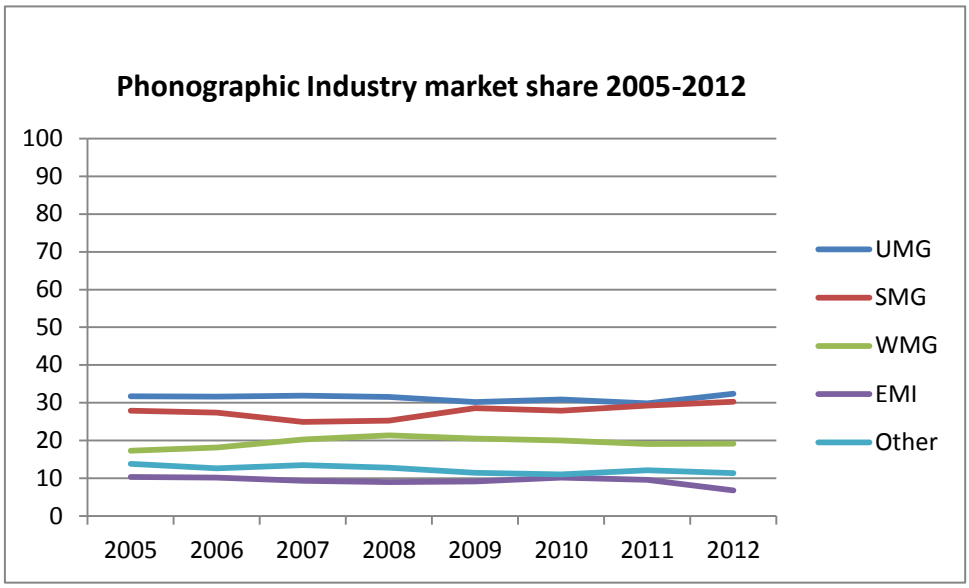

Figure 1: Market share in the phonographic industry

We propose that the incumbents survived due to the level of catalogue sales in the industry. The high levels of catalogue sales have allowed the incumbents to transition on to the new technology and eventually gain competencies in this area. We propose that the phenomenon of perpetuating sales is responsible for this situation. The question is whether the existing literature of incumbent survival can explain why the above occurs.

One could argue that catalogue sales are a specialized complementary asset. However, there are several flaws to this logic. Not every catalogue product sells units. Only some artists who perpetuate in consumers taste sell for an extended period. Other artists sell for a small period then stop. This perpetuation in taste is down to a unique characteristic of the industry- that after an initial surge and plateau, some products do

not diminish hugely in popularity over time. Therefore, the phenomenon of extended popularity makes the product an asset. Holding catalogue rights to the product is not an asset unless that asset benefits from the previous phenomenon. Teece (1986) stated that specialized assets are firm specific. This phenomenon is not specific to any firm or group of firms; any record company can harness it. Another established tenet of this theory is that specialized complementary assets are technology specific (Rothaermel and Hill, 2005; Tripsas, 1997). This perpetuation in taste is not technology specific; for example, The Beatles have sold millions of units of digital download, CD, tape and vinyl.

As we discussed, it is the perpetuation in taste that causes a product to be an asset and like a specialized complementary asset, the product needs an isolating mechanism such as strong copyright to protect it. The difference with the discussions in specialized complementary asset literature (Tripsas, 1997; Hess and Rothaermel, 2001) is that they discussed any intellectual property such as patent protection. We believe if it was patent protection (20 years) and not copyright protection (70 years) used as an isolating mechanism in the phonographic industry, the phenomenon would not cause incumbent survival to the same extent as it currently does. As patents only last for 20 years, the base of protection given to firms by perpetuating taste is reduced.

It is clear from this case study that strategic alliances and internal R&D competencies do not explain what has happened in the phonographic industry. The relevant literature discussing alliance networks (Ahuja, 2000; Hagedoorn and Duysters, 2002; Rothaermel and Thursby, 2007) states that for an incumbent to survive with this tool, they must be proactive in creating alliances and add competencies to their own. One can see from filings in the court case A & M RECORDS, INC et al. Vs Napster Inc (2000) that the industry was not trying to do either for several years after to introduction of digital technology. From the 2004 IFPI digital music report, it is clear that the industry began exploring alliances after the proliferation of a mainstream digital platform in iTunes. As regards, internal R&D capability, it seems from these reports, that firms in the phonographic industry had no internal R&D capability whatsoever.

Explaining the perpetuating sales model

Firstly, one might ask- how connected is catalogue sales to overall sales and does this relationship fluctuate year on year? To answer this question we performed a Pearson co-efficient test of the two variables over an eight-year period. This will answer whether they correlate year on year.

Table 1: Overall sales and catalogue sales correlation

Year	Overall Sales X	Catalogue Sales y
2005	618.9	229.5
2006	558.1	224.2
2007	505.5	194.1
2008	428.4	178.8
2009	373.8	163.9
2010	326.2	138.9
2011	330.6	151
2012	316	155
Σ	3457.5	1435.4

r = 0.980395

The Pearson Correlation Co-efficient scale ranks from minus one to one (≥-1, ≤1) and the two samples scored a correlation of .98, which is an extremely high result. This result shows that the phenomenon occurs year on year and is not a statistical anomaly.

As we have discussed, sales of certain artists remain significant in volume continuously. This is due to the phenomenon of perpetuating taste in the industry. Unlike, in other industries where a product would have a life cycle and would eventually decline in sales (Foster, 1986). Some products in the phonographic industry seemingly perpetuate in consumers' taste, even when the industry transitions on to a new technology. Once again, using the example of the Beatles- they had sold 545,000,000 units by 1971 and the figure as of 7 July 2012 is 2,303,500,000 (RIAA, 2012). This shows that the popularity of acts such as The Beatles reaches a plateau and then does not wane substantially over time. This then manifests itself in perpetuating sales. Several respondents in this study discussed that after the development of a new platform like digital downloading, the sales of catalogue artists actually increase. The Beatles have sold 865,000,000 albums on iTunes in just over one year since their licensing on that platform, from March 2011 to July 2012.

Catalogue sales as a percentage of overall sales have increased by 10% since 2008. When it is broken down, there is a larger proportion of the sales coming from digital sales. As taste perpetuates, consumers will want the catalogue artists on the new platform. Thus, this provides the incumbent firms with relevance and sales with consumers using the new technology. Therefore, the incumbents will have automatic presence on the new technological platform, even if they do not have any specialized assets to complement it.

As we discussed briefly earlier, copyright is very important for perpetuating sales to work as an incumbent survival tool. On average, based on the last eight years, catalogue sales make up 41% of overall sales every year. Artists from different decades spanning

70 years make up this 41%. If the span of copyrights were the same as patents which is 20 years, the pool of catalogue sales that provides incumbents with a radical change survival mechanism would be a lot thinner. It would therefore be less effective. As copyright is 70 years, it provides a wide array of artists that perpetuate in taste and thus a wider base of protection.

As perpetuating taste allows incumbents to remain an automatic presence on a new platform, it gives them the time to develop the specialized assets needed for them to use and exploit the new technology. This is quite different to the examples given by Rothaermel and Hill (2005), Teece et al (1997) or Tripsas (1997), where there is a need for specialized complementary assets in the initial period of technological discontinuity. In a perpetuating sales industry, the incumbents do not show these competencies until after the technological transition. The 2004 and 2005 IFPI reports show that only at that time, when other firms further down the supply chain established structures, did the incumbents begin to establish specialized complementary assets. Several of the respondents in this study spoke of the routines and structures the incumbents began to build from 2007 onwards, which was nearly a decade after the initial technological transition. This characteristic is unique to this phenomenon of perpetuating sales; in other incumbent survival models, firms must utilize specialized complementary assets during the technological transition. This shows that incumbents in this industry show a delayed use of Teece's (1986) dynamic capability.

Cohen and Levinthal (1990) discuss absorptive capacity in relation to R&D capability. In an industry displaying signs of perpetuating sales, firms will engage in increasing their isolating capacity. It is very difficult for firms to predict firstly which artists will be a major hit and secondly whether they will perpetuate in catalogue sales. Firms in the phonographic industry have been consolidating for the last 30 years. We believe this is because the more isolating mechanisms for products (i.e. copyrights for songs) they have, the wider their base will be to benefit from perpetuating catalogue artists. As we discussed this phenomenon can be quite random, hence firms must prepare as much as possible. This wide base therefore protects the incumbents from radical technological change. It does not matter what technology used or what platform firms used to sell the product. The important factor is whether a firm has the right to benefit from the artists' sales, if they perpetuate in taste. Characteristics of a perpetuating sales model

Table 1- Constructs of perpetuating sales model

Continuing taste of consumers	Consumers demand for certain products must not wane substantially over time and endure across generations of consumers and technologies
Demand results in sales	This taste must manifest itself in extended sales over generations

New Platforms	New platforms result in larger catalogue sales as consumer want old artists on new technology
Delayed dynamic capability	Once incumbents transition to the new technology, they begin to apply knowledge post transition
Specialized complementary assets learned after technological discontinuity	Unlike other radical technology surviving incumbents, specialized assets are learned after the technological transition
Longitudinal isolating mechanism	The greater the span of protection the better this phenomenon will work for incumbent survival.
Increasing isolating capacity	Firms will buy up isolating mechanisms to products in order to have a wide base of products that perpetuate in taste.

We believe that if an incumbent in an industry that has a perpetuation in the sale of products follows the above points, they will survive a radical technological shift regardless of their ability to have specialized complementary assets, alliance networks or absorptive capacity.

Conclusions

The major contribution in this paper is that we have developed a new model that explains why incumbents survived in this industry and believe any incumbent in an industry with perpetuating sales with the factors outlined in our discussion will survive radical technological change. It is also clear that extant theories of incumbent survival of radical technological change do not explain why the incumbents in the phonographic industry survived. We believe that it is applicable to situations other than the phonographic industry. The publishing, film and academic journal industries appear to have a perpetuation in taste that survives on to new platforms. They also benefit from copyright protection, which is important in facilitating a perpetual sales model.

Rothaermel and Hill (2005) stated that radical technological change with apparent adverse effects on incumbents could actually strengthen a firm if they have the specialized complementary assets to commercialize the product. With our model, we dictate that if a perpetual sales model exists in an industry, the new technology can strengthen an incumbent firm even with an apparent lack of specialized complementary assets and devalued competencies. This adds a new dimension to reasoning behind incumbent survival of radical technological change.

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