Capability Adaptation by Making Sense of New Products in Creative Industries[1]

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Our research investigates the process of incumbent adaptation to technological change in a mature industry. We focus on the music industry in order to analyze the transition of record companies from a traditional business model, based on compact disc technology, to a digital business model, based on mp3 technology. In particular, we investigate how incumbents responded to an externally-driven radical change by adapting their capabilities over time.

We build upon two streams of thought. First, we build on the literature on technological discontinuities (e.g., Christensen, 1997; Gatignon et al., 2002). According to such stream, a firm's capability base mirrors the characteristics of the products it produces and markets. This generates inertia in front of those technological changes that redesign either the entire product structure or the product architecture. Second, we rely on the emerging strategy literature that emphasizes the role of mental models in shaping the processes of strategy-making and strategy implementation (Tripsas and Gavetti, 2000; Danneels, 2003).

The research setting for this study is the music industry, which is a pertinent setting for investigating dynamics of capability adaptation, as the industry is subject to periodical technological change. Over the last 20 years, music companies have successfully adapted to major innovation breakthroughs (e.g. compact discs), while they have failed to grasp the opportunities presented by other disruptive technologies (e.g. internet, mp3s). The industry has recently experienced dramatic environmental turbulence, caused by the inability to exploit an externally-originated technology, the mp3 compression format (Barfe, 2004). As a result, it plunged into a 4-year recession, from which it is slowly, albeit constantly, recovering. Over the last years, indeed, the industry has embraced online technologies via multi-media alliances that allow music products to be delivered through Internet, satellite, handsets and mobile applications. We focus on the period from 1996 to 2006 in order to cover the transition from one dominant technological (CD) to another (mp3).

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In order to investigate and gain a granular understanding of the inner workings of organizational actors, the research draws on a qualitative framework (Eisenhardt, 1989; Kim, 1998; Huygens *et al.*, 2001). We use in-depth qualitative data, by relying on a set of 35 interviews with representative of record companies, as well as with external industry informants and experts (consultants, artist managers, managers from ICT organizations). We also use extensive archival sources (trade magazines, financial press, websites) to triangulate evidence from semi-structured interviews.

Our findings highlight that the process of adaptation to the new technological standard was significantly affected by the meaning associated to the product in the market. More precisely, those firms that managed to assign the product a different conceptualization than mainstream interpretation (i.e., a multi-content service vs. an unbundled album), were the first to gain market share and reputation in the market, by serving the new emerging B2B market (i.e. telecommunication companies, content aggregators and providers, Internet Service Providers, e-Commerce Music Stores vs. the more traditional bricks and mortar retailers). These firms also proved to be first to build the new capabilities required to compete in the novel setting (new media marketing and distribution capabilities vs. traditional marketing and distribution competences).

Our results provide three major contributions to the literature. First, we add to the literature on the creation of dynamic capabilities which focuses on how incumbents deal with discontinuous technological change (e.g. Helfat and Peteraf, 2003; Lavie, 2006). In this respect, we highlight how the interpretation of product technology and architecture hides the core insights on the generation of new knowledge and, hence, on the reconfiguration of organizational capabilities. While we show that a capability gap can be quickly filled via a strategy of capability-substitution (namely, by "buying" the new capabilities on the market, see Lavie, 2006), we highlight the associated opportunity and reputation costs, and we derive key implications on how a firm should organize to build dynamic capabilities.

Second, we contribute to the emerging literature that links managerial mental models to strategy-making (see Gavetti et al., 2005), by highlighting how managers can proactively make sense of their products and market strategy in response a technological change.

Third, we contribute to the literature on market-facing competences (e.g., Danneels 2002; Henderson, 2006), by identifying the critical relationship between product technology, the served market, and their relationship as enacted by market-facing competences. We specifically show that in creative industries (see Caves, 2000), as opposed to more traditional technological settings (e.g. automotive, pharmaceutical, chemical, etc.), it is the actual management of market-facing competences that drives the ability to profit from technological change. This does not occur due to the complementary assets owned by the firm (Teece, 1986) but, rather, because of the ability of such competences in making sense of the opportunities and threats in the market.

References

Barfe, L. 2004. *Where have all the good times gone? The rise and fall of the record industry*. London: Atlantic Books.

Caves, R.E. 2000. *Creative Industries: Contracts between Art and Commerce*. Cambridge, MA: Harvard University Press.

Christensen, C.M. 1997. *The innovator's dilemma: when new technologies cause great firms to fail*. Cambridge, MA: Harvard Business School Press.

Danneels, E. 2002. The dynamics of product innovation and firm competences. *Strategic Management Journal*, 23, 1095-1121.

Dannels, E. 2003. Tight-Loose coupling with customers: The enactment of customer orientation. *Strategic Management Journal*, 24, 559-576.

Eisenhardt, K.M. 1989. Building theories from case study research. Academy of Management Review, 14, 532-550.

Gatignon, H., Tushman, M.L., Smith, W. & Anderson, P. 2002. A structural approach to assessing innovation: Construct development of innovation locus, type, and characteristics. *Management Science*, 48, 1103-1122.

Gavetti, G., Levinthal, D.A. & Rivkin, J.W. 2005. Strategy-making in novel and complex worlds: The power of analogy. *Strategic Management Journal*, 26, 691-712.

Helfat, C.E. and Peteraf, M.A. 2003. The dynamic resource-based view: Capability Lifecycles. *Strategic Management Journal*, 24, 997-1010.

Henderson, R. 2006. The Innovator's Dilemma as a problem of organizational competence. Journal of Product Inovation Management, 23, 5-11.

Huygens, M., Baden-Fuller, C., Van Den Bosch, F.A.J. & Volberda, H.W. 2001. Co-evolution of firm capabilities and industry competition: investigating the music industry 1877-1997. *Organization Studies*, 22, 971-1011.

Kim, L. 1998. Crisis Construction and Organizational Learning: Capability Building in Catching-up at Hyundai Motor. *Organization Science*, 9(4): 506-521.

Lavie, D. 2006. Capability reconfiguration: An analysis of incumbent response to technological change. *Academy of Management Review*, 1, 153-174.

Teece, D. 1986. Profiting from technological innovation: Implications for integration, collaboration and public policy. *Research Policy*, 15, 85-305.

Tripsas, M. & Gavetti, G. 2000. Capabilities, cognition, and inertia: Evidence from Digital Imaging. *Strategic Management Journal*, 21: 1147-1161.