

# **Does institutional framework facilitate firm's dynamic capability of digital music services?**

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The evolution of IT from digital delivery system to digital devices such as Apple I-pod has been continuous impetus to existing music industry. Illegal sharing music files on the Internet or the other digital delivery system have deteriorated and challenged current institutional framework of copyright. Even though some firms demonstrated some successful business models of digital music services, many innovators of digital music services are confronted by infringement of copyright such as illegal music files as well as difficulty of making new rules among right holders, syndicates, and the other stakeholders on introduction of new digital music services. From those observations, this research initially formulated a research problem of how firms introduce new digital music services governed under intellectual framework of copyright.

In order to define industrial architecture of digital music service, this research adopts a complex system of production, consisting of various subsystems and components on division of labor, where knowledge production has been decentralized and specialized (Simon 1962; Smith 1994; Pavitt 2002). Firms, as a system integrator, need to access specialized knowledge within industrial architecture. More importantly, firms should incorporate new knowledge of copyrights and work with new supporting institutions of copyright. Through those processes, firms introduce new organizational routines and change existing organizational routines.

This research adopts dynamic capability perspective. Dynamic capability can be regarded as a higher evolutionary capability to manipulate organizational capabilities, because dynamic capability can be defined as a higher organizational capability to reconfigure, leverage, or integrate and coordinate organizational capabilities (Teece, Pisano et al. 1997; Bowman and Ambrosini 2003). Theoretically, this research formulates what constrains firm's dynamic capability of new digital music service.

On the emergence of digital music services, many incumbent music firms are struggling to survive on disastrous effects, while mobile operators or some electronic companies such as apple are enjoying new business by successfully diversifying into new digital music service business. Therefore, this research investigated the cases of mobile operators in South Korea. Therefore, this research used multiple cases (three firms in mobile industry at South Korea) on qualitative approach, rigorously using interview methods to collect data. 53 interviews from three firms, their suppliers, and relevant institutions were conducted. Supplementary, this research also uses different sources of data such as research papers and books, government reports, and news articles, etc.

As a result, this research reinforced co-evolutionary process between technology and institutional frameworks (Nelson and Sampat 2001). This research demonstrates how firms interact with supporting institutions and set up new rules, interpreting into firms' external routines. At the initial stage of digital music service, uncertain and inefficient routines lagged firm's dynamic capability. There are different speeds of dynamics; a changing speed of technology or innovation is faster than of institutional framework. The discordance originated from different dynamic speeds contain dynamic capability of digital music services. Secondly, infringement and deterioration of institutional framework can be controlled by new technology. It would have some implications of market institution building from technological perspectives. .