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The impact of digital innovation on the innovation of traditional industry

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TREO Talk Paper

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Abstract

Digital innovation is an essential part of business as it offers an impetus to the growth of firms in the digital era. Digital innovation has given rise to new types of businesses, which are generally intertwined with big data and social media (e.g. Facebook, YouTube, Uber). These businesses either did not exist before or existed only as an informal form. Prior literature extensively studied the issues related to newly created businesses (e.g. e-commerce, sharing economy) along with their digital innovation. However, few explored how the digital innovation of the newly created businesses affects that of traditional businesses. For instance, what is the impact of user generated content in social media platforms on the innovation of media-related industries such as video and audio equipment businesses?

Answering this question is meaningful as our understanding of digital innovation has changed greatly. Traditionally digital innovation is theorized with rigid assumptions by focusing on fixed products, separating the process and the outcome, and assuming centralized controlled agencies. However, recent discourse on this topic concerns applying a new set of logic that reflects flexible and dynamic characteristics of digital innovation. For instance, software is constantly updated in the market via incremental and iterative development, which is an example of a fluid product that encompasses both process and outcome with decentralized agencies for its innovation. Recent literature recommends a new set of logic for digital innovation as follows: dynamic problem-solution design pairing, socio-cognitive sense making, technology affordances and constraints, and orchestration (Nambisan et al. 2017).

We propose a study that applies the new set of logic as a theoretical lens to investigate the indirect effect of digital innovation of social media on the innovation in relevant traditional industries. We are interested in theorizing how this effect arises and empirically examining its magnitude. We will collect data from YouTube (i.e., a social media platform) and the video/audio equipment industry (i.e., a relevant traditional industry). The dependent variable will be the degree of innovation of a firm within the industry. This will be measured by new-product sales over R&D spending or the gross margins over new-product sales (Aase et al. 2018). The main independent variable will be the digital innovation in social media, which could be measured by the quality and quantity of user generated content relevant to the new audio and video equipment products on YouTube.

This study will contribute to the digital innovation literature by expanding the discourse with new assumptions that acknowledge expanded boundaries in scope, distributed agencies, and a blurred line between processes and outcomes of digital innovation. In practice, this study can provide implications regarding the digital innovation that happens to newly created businesses. Further, this research can provide guidance to firms in traditional industries regarding how to utilize internal and external sources of innovation to create synergy.

References

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