"Investigating the Characteristics of Product Development Process on Brand Performance in Digital Innovation: A Multilevel Model"

Abstract
Although the diversity and velocity with which products can be developed and disseminated on digital platforms has fostered and reinforced a climate of open innovation, it has also given rise to an innovation diffusion paradox whereby resources are being squandered on innovations that may never catch consumers’ attention. Consequently, it is imperative for developers to bolster the discoverability of their products in order to survive in such highly competitive open innovation ecosystems. To this end, we draw on brand equity theory to advance a research model that not only introduces the novel concept of brand vitality alongside established dimensions of brand equity (i.e., quality assurance, symbolic image, and visibility) as antecedents of developer performance in open innovation ecosystems, but also posits product development process attributes (i.e., product irregularity, pace, and scope) as factors affecting the abovementioned brand equity dimensions. Our research model was validated in two stages. In the first stage, we extracted and analyzed archival data of 8,915 developers from one of the leading mobile application stores in China. Analytical results indicate that the three product development process attributes are associated with developer performance as measured via app downloads and conversion rate. Following which, a multilevel mediation analytical approach was conducted in the second stage based on survey data gathered from actual app users on their recalled developers. We discovered that brand equity at the individual level fully mediates the impact of product development process attributes on developer performance. In this sense, findings from our study contributes to an in-depth appreciation of how developers can leverage on
product development process to grow their brand within open innovation ecosystems.

Bio
Chee-Wee Tan is a Professor at the Department of Digitalization in Copenhagen Business School (CBS), an Honorary Professor of Business Analytics and Digitalization at the Nottingham University Business School China in the University of Nottingham Ningbo China (UNNC), a Distinguished Research Scholar at the Faculty of Business in Lingnan University (LU), a Guest Professor at the School of Management in the University of Science and Technology of China (USTC), as well as a Visiting Professorial Fellow at the School of Information Systems and Technology Management in University of New South Wales (UNSW). He received his Ph.D. in Management Information Systems from the University of British Columbia. His research interests focus on design and innovation issues related to digital services. His work has been published in leading peer-reviewed journals such as MIS Quarterly (MISQ), Information Systems Research (ISR), Journal of Management Information Systems (JMIS), Journal of the Association for Information Systems (JAIS), Journal of the American Society for Information Science and Technology (JASIST), European Journal of Information Systems (EJIS), and Decision Support Systems (DSS), among others. Apart from his current appointment as a Senior Editor for MISQ, Chee-Wee is currently serving on the editorial boards for Industrial Management & Data Systems (IMDS), IEEE Transactions on Engineering Management (IEEE-TEM), Information & Management (I&M), Internet Research (IntR), Journal for the Association of Information Systems (JAIS), Journal of Computer Information Systems (JCIS), and Journal of Management Analytics (JMA). In addition, Chee-Wee has served in various editorial capacities for special issues at Decision Support Systems (DSS), I&M, and JMIS. Finally, Chee-Wee is the co-director of the joint research center between CBS and the Antai College of Economics and Management (ACEM) in Shanghai Jiao Tong University (SJTU).