

The adoption and resistance of disruptive information technologies

With technology permeating every part of our life, both personal and at work, the issues related to its adoption have drawn concerns of the users. Technology acceptance studies have provided valuable insights and have been consistently published in various outlets (Lee and Lehto, 2013). The topic has also garnered high citation as evidenced by previous studies. As new technologies are being introduced, it is expected that the adoption and resistance issues will continue to attract user interest. The existing technology acceptance theories are old-fashioned, yet many researchers still apply them to specific contexts (e.g. developing countries, education, and health care areas). These theories may have limitations in explaining the adoption of emerging disruptive information technologies (Sun and Jeyaraj, 2013). Thus, if we fill this research gap, researchers will have better opportunities to develop and understand related topics based on the studies that are included in this special issue.

This special issue focuses on the adoption and resistance of emerging information technologies (e.g. IoT, artificial intelligence, augmented reality, virtual reality, big data, cloud computing, and FinTech), which bring disruptive changes to business activities and individual lives. A total of eight papers are accepted. Six papers focused on adoption issues of Fintech, wearable devices, Industry 4.0, the blockchain, mobile payment, and intelligent personal assistants, while two papers concentrated on resistance-related issues of feral system and intelligent CCTV.

More specifically, Shen *et al.* (2018) proposed a revised expectation-disconfirmation model for wearable health information systems. This study introduced a new concept “Intermittent discontinuance” on the post-adoption usage of information systems. Fan *et al.* (2018) proposed a research framework for mobile payment service in terms of security and trust. In this study, the authors introduced the security measure concepts (measured by security technology protection, security rules, and security responsibility commitment) and the payment culture concepts (measured by coverage of mobile payment context and uncertainty avoidance). The study also compared China and the USA based on their market penetration rate. Ryu (2018) investigated the effect of benefit and risk toward Fintech services. The study suggested antecedents of perceived risk (i.e. financial, legal, security, and operational risk) and benefit (i.e. economic benefit, seamless transaction, and convenience). The study also checked the moderating effect of different user types. Davison and Ou (2018) investigated why employees resisted the use of company’s information systems and instead chose to use unauthorized feral systems for their daily tasks. Lin *et al.* (2018) examined the strategic response of Industry 4.0 in Chinese automotive industry and identified critical factors for its successful implementation. The study adopted Technology-Organization-Environment framework to build the research model. Ha (2018) proposed the expanded regret theory to examine the gap between expected benefits of the current system to anticipated regret. The study focused on the effect of the future upgraded system on consumer behavior when adopting a new technology, such as



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intelligent CCTV. Han and Yang (2018) proposed a research model to explain user behaviors of intelligent personal assistants known as AI secretary. The study adopted parasocial relationship, such as task attraction, social attraction, and physical attraction, and privacy/security risk toward adoption of intelligent personal assistants. Zamani and Giaglis (2018) examined how new forms of digital money (e.g. Bitcoin) and technologies (e.g. blockchain) with embedded trust in decentralized networks alter markets and commerce.

Overall our special issue received a plenty of submissions, and we have accepted quality articles that are related to the aim of the special issue. These accepted articles have found meaningful results and have made valuable academic discussions. Despite the various significant contributions of this special issue, there are still a lot of challenges in developing new theories to explain the acceptance of disruptive information technologies. According to Seddon *et al.* (2016), there are two types of theories, variation models, and process models. First, many factors can be incorporated to study the variation of adoption success. The more intense the disruptive innovation, the greater the change required and the risks (Lyytinen and Rose, 2003). For companies, architectural changes, including both organizational and system architectural changes, should be considered for the successful adoption of disruptive information technologies (Sherif *et al.*, 2006). Organizational architectural change needs to involve cultural factors for organizational learning, while system architecture change needs to focus on safety factors, such as security and reliability issues. Innovative attitudes, such as risk-taking, flexibility, and creativity, are also critical for the disruptive information technology adoption from the end-user perspective (Govindarajan and Kopalle, 2006). Moreover, as laws and policies tend not to keep up with the pace of technology change, information technology compliance issues will be more debatable than before. Second, since adopting disruptive information technologies involves significant changes in the organization, the process of successful adoption is also worthwhile studying. Opening the blackbox of how to make the organization architectural changes and how to match the system architectural changes with the organizational architectural changes during the adoption will shed light on our understanding the adaptation path of an organization when it disrupts itself by adopting new technologies. Therefore, it is imperative that further study can discuss the extended theories that emphasize either the factors or paths of disruptive information technology adoption.

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