

Highlights of Kevin Zhu's Scholarly Contributionsⁱ

- Kevin Zhu introduced a three-stage model for IT diffusion which uncovers many important factors affecting the diffusion process, enhancing the “Technology-Organization-Environment (TOE) model” (MS 2006). His work identified 5 critical factors through analyzing global data from 2000 firms in 10 countries. In particular, he found that competition positively affects initiation and adoption, but negatively impacts routinization, suggesting that too much competition is not necessarily a good thing for technology assimilation as it drives firms to chase the latest technologies without absorbing current ones effectively (MS 2006).
- He, for the first time in the literature, empirically demonstrated that the IT diffusion and adoption processes are different for different countries and economic environments, thus elevating the IT value research to the country level (EJIS 2006) and adding an international dimension to the innovation diffusion literature. He further called the IS field to shift focus from IT adoption to post-adoption usage and value creation (ISR 2005).
- His work shows that IT can significantly impact supply chains: from structural change (reduce, as opposed to increase, the number of suppliers, thus empirically testing the “*move to the middle hypothesis*”, JMIS 2008) to efficiency improvement (but it is very asymmetric to upstream vs downstream), to mitigating the “*Bullwhip Effect*” (ISR 2012). Backend IS integration and managerial resources were found to become even stronger in IT-enabled supply chains (ISR 2009). Resource complementarity was found to be another significant driver in IT value (ISR 2002).
- He developed an original *Information Transparency Hypothesis* which sheds light on the buyer and seller's optimal behavior on electronic markets. Information transparency was found to be critical to the success (or failure) of online markets, especially in the B2B contexts (MS 2004). Yet its benefits could be competed away if both buyers and sellers face oligopolistic competition, and it affects buyers and sellers very *differently*: one side will be hurt, depending on the competition mode in the downstream (Mkt Sci 2009). He also found that information transparency can *hurt* consumers. This is a surprising result given the expectation that online markets create substantial value for consumers.
- He, along with his co-authors, made an original contribution through studying the Internet open standard vs. EDI proprietary standard and generated numerous managerial implications on the process of migration from the Internet to EDI, which have huge impacts on industry. He found that experience with older standards tends to create switching costs and makes it difficult to shift to open, newer standards, thus demonstrating “*excess inertia*” in technology change (MISQ 2006).
- Another stream of his work showed that open source software has altered the nature of competition, and turned around the traditional “*lock-in*” strategy by proprietary software companies. By developing a game theoretic model, he found that the use of “*lock-in*” strategy is counterproductive in the open source world (ISR 2012).
- User contribution is critical to online communities but also difficult to sustain given its public goods nature. Using a *hidden Markov model*, he and his co-authors recently show that peer recognition (as opposed to monetary incentives) can boost user contributions and is an important mechanism in online communities (MISQ 2018).

ⁱ Some of the papers cited here were joint work by Kevin Zhu and his co-authors (whose names appeared in each of the papers respectively).