Creating New Markets in the Digital Economy: A Theory of Latent Demand

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Much of academic literature discusses adoption of new technology through the technology acceptance model (TAM), an information systems theory that models how users come to accept and use a particular technology (cf. Venkatesh et al., 2003). Work in this domain suggest that when users are presented with a new technology, factors influencing their decision about why, how and when they will use it, are constructs such as Perceived usefulness and Perceived ease-of-use.

The implicit assumption here is that the technology is known, which means that studies can be conducted to investigate when, why and how it was adopted. However, it does not explain how the latent need for these technologies came about in the first place. In other words, technology adoption seems to take a technology centric approach towards acceptance of technology rather than an individual centric approach of understanding latent needs and its fulfillment through different types of technologies.

We present a theoretical model extending research into value creation in context (Ng and Smith, 2012) and how latent needs emerge from (1) systemic stress and individual’s effectual action to obtain more resources (2) from the need for past, present and future information in daily living and (3) the contextual variety of value creation resulting from combining usage experiences and social interactions. We propose the pathway from needs to wants (the form in which needs are fulfilled) through a discussion on institutional logic and how wants could result in the market demand for particular types of information-rich technology-enabled services (Ng, 2013). We then propose context-based design principles for the future of products with pervasive digital technologies i.e. the “incorporation of digital capabilities into objects that previously had purely physical materiality” (p. 1398 Yoo et. al., 2012)) such as embedding sensors into existing products e.g. doors, windows, appliances or through software-based digital interface capabilities such as augmented reality to animate physical objects.

Our work contributes the understanding of digital materiality, internet-of-things and the manufacturing of future ‘incomplete products’, extending the work on servitization, and service infusion where such future products will act as more dynamic forms of indirect service as proposed by service-dominant logic (Vargo and Lusch, 2008), personalizable by the customer, with value co-created across multiple contexts of use.

References
http://www.valueandmarkets.com

