The Roles of Contextual Variety and Means Drivenness in Driving Continuing Use of Information Technology

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Continuing IT Use

- Existing literature suggests people continue to use IT product or service because of:
  - Intention: perceived usefulness (Technology Acceptance Model by Davis, 1989; Venkatesh &Davis, 2000) e.g. skype call; online banking.
  - Emotion: perceived enjoyment (Kim et al., 2007) e.g. playing online games.
  - Habit: (Limayen et al., 2007) e.g. checking emails.

Research Question

- Here is an example:
  - A gentleman walked into a shop to buy a new hat. But he found there was no mirror nearby. He tried on a hat and took a picture of himself using his smartphone. He then sent it to his wife for her opinion.
- Is such behavior intentional, affective or habitual?
  - None of them
- IT use in this situation is driven by
  - The specific context
  - The individual's tendency to integrate resources

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Theoretical Development

- Technology use is often set within a context of which the individual is a part.
- Contexts are varied to the extent that goals of IT use are not predetermined.
- Reconceptualization of IT use as value co-creation within an ongoing set of contexts (Vargo & Lusch, 2004, 2008)

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Theoretical Development

- Two contextual variables were developed
  - Contextual Variety
    - The degree of variability in the set of contexts within which an individual faces in IT use (Chandler & Vargo, 2011)
  - Means Drivenness
    - An individual's tendency to acquire new means to deal with an uncertain future (Sarasvathy, 2008).

      e.g. 'what can I do with these means' rather than 'what I should do to achieve this goal'
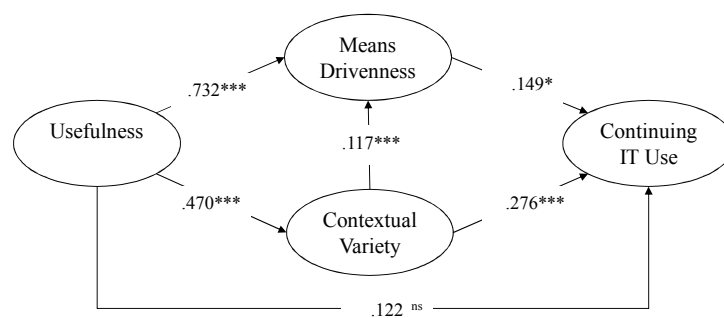
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Theoretical Model
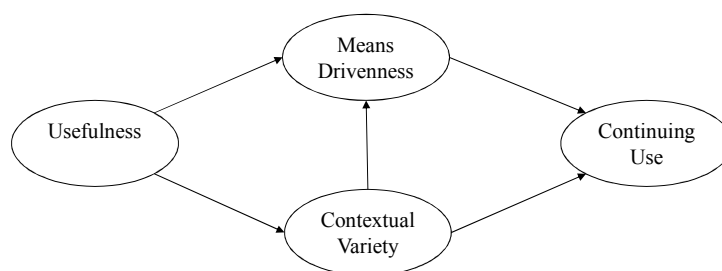
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Research Method

- 4 focus group study with 32 participants from Singapore, Malaysia and China
  - Scale development of Contextual Variety and Means Drivenness
- Online survey with 1,526 smartphone users of China Mobile
  - Hypotheses test

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Research Findings

χ^2 = 87.984, df = 39, p < 0.001, χ^2/df = 2.256, NFI = 0.983, TLI = 0.987, CFI = 0.991, RMSEA = 0.050
*p<0.05 (2-tailed), ***p < 0.001 (2-tailed)

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Research Findings

- Both contextual variety and means drivenness increase continuing IT use;
- Increased contextual variety results in increased means drivenness;
- Contextual variety and means drivenness mediate the relationship between perceived usefulness and continuing IT use.

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Practical Implications

- IT use driven by context (contingent) traits, firms need to understand contexts rather than merely users
  - Marketing segmentation of use-type rather than user-type such as context profiling

    e.g. free download music site, baidu_mp3* listed the songs based on context:

    'Feeling lonely; missing you; about to cry and etc'

- With greater visibility of context, new ways to serve, new products and new hyper-variety will arise.

    e.g. Location-based applications.

    *http://list.mp3.baidu.com/zt/2010/taste/index.html

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Practical Implications

- Such resourcefulness and the lifestyles individuals seek are part of the changing urban environment and their evolving needs would drive new markets for innovation.
- Means drivenness coupled with technological advancement could generate greater empowerment of the individual.
  - New service/products designed for connectivity and resource integration

    e.g. iPhones, iPads, and other handheld devices have resulted in greater integration and interconnectivity, allowing individuals to integrate resources in more varied conditions.

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Theoretical Contributions

- Contributes to the theoretical understanding of IT use in context through the two variables of contextual variety and means drivenness.
- Individuals hire products or services to do the job (Christensen et al., 2007), context manifests the 'problem to be solved' or 'the job to be done'
- The use of effectuation logic by technology users, e.g. means-driven vs. goal-driven

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Research Project

- EPSRC/C-AWARE: Enabling Consumer Awareness of Carbon Footprint through Mobile Service Innovation, Professor Irene Ng, University of Warwick and Professor Ian Leslie, Cambridge University
- For more information, please refer to http://gow.epsrc.ac.uk/ViewGrant.aspx?GrantRef=EP/I000186/1

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