

Association for Information Systems

AIS Electronic Library (AISeL)

ICEB 2009 Proceedings

International Conference on Electronic Business
(ICEB)

Winter 12-4-2009

Realizing the Value of Mobile Services in the Exhibition Industry – The Verification of "Limit-to-Value" Framework

Hsin-Lu Chang

Shu-Ling Tseng

Follow this and additional works at: <https://aisel.aisnet.org/iceb2009>

This material is brought to you by the International Conference on Electronic Business (ICEB) at AIS Electronic Library (AISeL). It has been accepted for inclusion in ICEB 2009 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.

REALIZING THE VALUE OF MOBILE SERVICES IN THE EXHIBITION INDUSTRY -- THE VERIFICATION OF "LIMIT-TO-VALUE" FRAMEWORK

Hsin-Lu Chang¹, and Shu-Ling Tseng²
Department of Management Information Systems
The National Chengchi University, Taiwan
¹hchang@mis.nccu.edu.tw; ²97356010@nccu.edu.tw

Abstract

The MICE industry and the M-Commerce service recently become a popular issue since the mature internet environment. It will be a significant subject to realize the IT investment in the MICE industry. The study is to test and verify "the Limits to Value for IT Investments framework" [1] and to redefine and modify the constructs of model to examine the barriers of IT value, in the context of M-Commerce in the MICE industry. This reforming model can help us understand the critical value discounting factors and the impact about adoption and usage of the innovative IT in the marketplace.

Keywords: MICE, M-Commerce, valuation barriers, conversion barriers, U2EX

Research Objective

The MICE (Meetings, incentives, Conventions and Exhibitions) industry and the mobile commerce service recently become a popular issue since the mature internet environment. According to the development of existing theories of Information Technology (IT) valuation and technology adoption and diffusion, the research objective of our study is to test and verify "the Limits to Value for IT Investments framework" by Chircu and Kauffman [1] and to redefine and modify the constructs of model to examine the barriers of IT value, in the context of mobile commerce in MICE industry. This reforming model can help us understand the critical value discounting factors and the impact about adoption and usage of the innovative IT in the marketplace. To be more specific, the research addresses the following questions:

1. What critical factors will alter the perceived value of exhibitors of the U2EX service? What type of factors will let the value decrease?
2. What are the valuation barriers and conversion barriers that influence the U2EX service value before and after introduce?

Literary Reviews

In this study, we will examine the value barriers of IT-enabled mobile service in the MICE industry. So in this literature review, we focus on the IT value and

the key factors of IT value barriers.

IT value has been conferred on various methods of analysis. We adopt the model developed by Bakos and Kemerer [3] and Davem and Kauffman [11] to distinguish IT value into two types, include potential value and realized value. The potential value represents the maximum value opportunity available to the investor if the IT is implemented successfully, while the realized value is defined as the measurable value that can be identified after the implementation ensues [1]. The investment decision must be based on a comparison of the potential value that management saw in the project with respect to the realized value following implementation, in light of the value conversion contingencies that intervene [11].

A number of authors have identified various kinds of barriers to adoption of technological innovations. In our research, the IT value barriers are divided into valuation barriers (industry and organizational barriers) and conversion barriers (resource, knowledge and usage barriers). Industry barriers are generated by the industry structure that may favor technologies that "plug in" to the existing systems to the detriment of other, nonstandard, but innovative technologies [5]. Organizational barriers are suggested by a number of organizational learning theories as well [1]. For example, the more complex a technology, the harder it is for untrained users to adopt [2]. The unique characteristics of firms, such as organizational routines and norms, market and product expertise, customer and supplier relationships, and human capital can lead to different potential value estimates for the same investment in IT [6] [7] [9]. With regard to resource barriers, IT requires additional investments in co-specialized resources, such as new organizational processes and human capital [4] [6] [7]. The resources limit to value of IT the most when they are single, but they do not ensure that the firm will realize potential value. Attewell argued that implementing a complex new technology needs both individual and organizational learning because the role of know-how and organizational learning are potential barriers to the adoption of innovations or technology [2]. The redesign of organizational processes requires employees to learn new skills and the organization to develop new routines, and thus creates knowledge

barriers [2]. Knowledge barriers also stem from a lack of absorptive capacity, which is developed over time by acquiring related knowledge and expertise in diverse areas [10]. Usage barriers are often related to user perceptions regarding the technology and the responsibilities that must be shouldered when it is used. Unfavorable perceptions will result in users not adopting the technology solution [8] [12] [15] [16].

The Research Framework

Industry background and U2EX introduction

MICE (Meetings, incentives, Conventions and Exhibitions) industry [13] is under recently rapid development. It has certain characters, including high growth potential, high value-added, high innovation benefit, while also creating greater job opportunity, greater output of value, and greater inter-industry relationship. Therefore, Taiwan government aims to help developing MICE industry through constructing a new Taipei World Trade Center Exhibition hall located in Nangang, Taipei city [14], while also assigning TAITRA (Taiwan External Trade Development Council) to form a new department – “Exhibition Department”, specialized in setting up strategies and making decisions among developing Taiwan’s MICE industry. TAITRA exhibition department came to ask for support from the SSRC (Service Science Research Center) located in National Chengchi University. After being requested, the SSRC formed a special consulting team to help TAITRA’s exhibition department with setting up this new internet based system platform, and came out with the project named U2EX, it is a platform that can handle all the necessary works and as well as provide all the services online. In this research paper, our task is to study out the relationship between IT value and value barriers of U2EX.

Research Framework

This framework classifies IT value to potential value and realized value and identifies barriers specific to the valuation process, which including industry and organizational barriers, and to the conversion process, which involving resource, knowledge and usage barriers. The potential value will be in a given industry and organizational setting. Realizing the potential value depends on conversion contingencies [18]. In our research, potential value means the exhibitors’ expectation of the new IT service “U2EX”, and the IT value will be limited through conversion barriers become realized value. While we recognize that the assessment of value is subject to bounded rationality [17], we focus in our framework on a firm's ability to obtain value, and not its capacity to evaluate completely the corresponding value flows. The general framework is shown in figure 1.

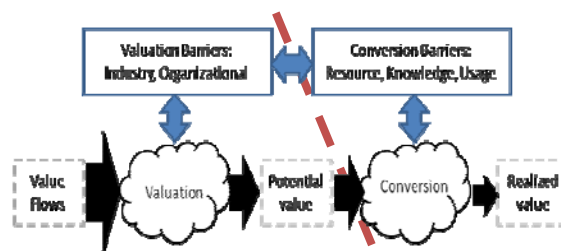


Figure1. The Limits to Value for IT Investments

Research Method

We plan to execute the research starting with the survey in the U2EX project. We will be scheduled with two steps of investigation involved in mobile commerce in MICE industry. We want to comprehend how the exhibitors evaluate the new IT service of mobile commerce.

The exhibitors will have a thought in mind after hearing about the new IT service, and the thought will initially influence the decision of pricing the U2EX service. Therefore, in the first step, we will send out the questionnaire to collect the exhibitors’ perceived value of the new technology of MC in the specific exhibition. That is to say, we will aim at assembling the expectative evaluation of the U2EX service from the exhibitors’ perception before the potential customer (buyer) use the U2EX. The data we will collect includes the unique characteristics of industry and organization, such as path-dependency of co-specialized assets, industry structure, complementary, organizational routines and norms, market and product expertise, customer and supplier relationships, human capital, etc.

After the exhibitors’ customers adopt and use the U2EX service, the exhibitors will have another assessment about the new IT service, and the thought will continue influence the decision of pricing the U2EX service. Accordingly, the second step will focus on the evaluation of the U2EX service from the exhibitors’ perception after the buyers use the new service of MC. We will send out the second questionnaire, and to compare the difference of the U2EX service’s valuation, trying to find out the characteristics of the barriers which influence the value.

Expected Distribution

The final deliverable can divide into two parts. First, our research tries to verify "the Limits to Value for IT Investments framework" by Chircu and Kauffman [1], evaluating both valuation barriers and conversion barriers, and find out the critical factor which let the potential value change into realized value, even let the IT value decrease. Second, in the mobile commerce context, our study can create more

valuable IT service value for exhibitors in exhibition industry, such as increasing buyer base, improving relationship with customers, and realizing marketing opportunity, etc.

References

- [1] Alina M. Chircu and Robert J. Kauffman., Limits to Value in Electronic Commerce-Related IT Investments. *Journal of Management Information Systems*, Fall 2000, 17, No. 2, pp 59-80.
- [2] Attewell, P., Technology diffusion and organizational learning: the case of business computing. *Organization Science*, 3, 1, February 1992, pp1-19.
- [3] Bakos, Y. and Kemerer, C.F., Recent applications of economic theory in information technology research. *Decision Support Systems*, 8, 5, September 1992, pp365-386.
- [4] Barua, A.; Lee, B.; and Whinston, A.B., The calculus of reengineering. *Information Systems Research*, 7, 4, December 1996, pp 409-428.
- [5] Brynjolfsson, E. and Kemerer, C.F., Network externalities in microcomputer software: an econometric analysis of the spreadsheet market. *Management Science*, 42, 12, December 1996, pp1627-1647.
- [6] Brynjolfsson, E. and Hitt, L., Beyond the productivity paradox. *Communications of the ACM*, 41, 8, August 1998, pp49-55.
- [7] Brynjolfsson, E. and Hitt, L.M., Information technology as a factor of production: the role of differences among firms. *Economics of Innovation and New Technology*, 3, 4, 1995, pp183-200.
- [8] Chircu, A.M. and Davis, G.B. and Kauffman, R.J., Trust, expertise and e-commerce intermediary adoption. *Proceedings of the 2000 Americas Conference on Information Systems*, Long Beach, CA, August 2000, pp10-13.
- [9] Clemons, E.K. and Row, M.C., Sustaining IT advantage: the role of structural differences. *MIS Quarterly*, 15, 3, September 1991, pp275-292.
- [10] Cohen, W.M. and Levinthal, D.A., Absorptive capacity: a new perspective on learning and innovation. *Administrative Science Quarterly*, 35, 1, March 1990, pp128-152.
- [11] Davern, M.J. and Kauffman, R.J., Discovering potential and realizing value from information technology investments. *Journal of Management Information Systems*, 16, 4, Spring 2000, pp121-143.
- [12] Davis, F.D., Perceived usefulness, perceived ease of use, and user acceptance of information technology, *MIS Quarterly*, 13, 3, September 1989, pp319-341.
- [13] <http://tw.business.nat.gov.tw/pdf/industry/13-MICE-cn.pdf> (Research from the Department of Investment Services Ministry of Economic Affairs of Taiwan)
- [14] http://www.excotaiwan.com.tw/chinese/presscenter/industryinfo_view.shtml?docno=1971 (news release about Taiwan MICE industry facts)
- [15] Moore, G.C. and Benbasat, I., Development of an instrument to measure the perceptions of adopting an information technology innovation. *Information Systems Research*, 2, 3, September 1991, pp192-222.
- [16] Rogers, E.M., *Diffusion of Innovations*, 3d ed. New York: Free Press, 1983.
- [17] Simon, H., *Administrative Behavior: A Study of Decision-Making Processes in Administrative Organizations*, 4th ed. New York: Free Press, 1997.
- [18] Weill, P., *Do Computers Pay Off?* Washington, DC: ICIT Press, 1990.