

# Visible IT in Credit Unions: Strategic Advantage and Disadvantage in Two Web Eras

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## ABSTRACT

*Research indicates that rapidly evolving technology and markets do not provide a first mover strategic advantage but favor the second mover. This paper introduces a third variable: hype. In a time of rapid technology and market evolution, hype overrides the expected results and gives the first mover a strategic advantage. This study examines a homogeneous set of medium-sized information-dependent and information-intensive organizations as they implement visible information technology in two eras: during a time of intense hype and during a more normal time where technology has become commonplace. One hundred matched triples of credit unions were examined as they chose to remain offline, implement an informational website, or implement a transactional website during the highly hyped Internet expansion time of 1998 through 2002. One hundred matched pairs of credit unions were then examined during the more normal time from 2003 through 2007. Results indicate that credit unions that embraced the hyped technology gained significant strategic advantage. Second-moving credit unions that waited for the more mature technology survived, whereas the credit unions that did not adopt the technology were at a significant strategic disadvantage.*

*Keywords:* Banking IS, Information Technology Adoption, IS Value, IT Investment Evaluation

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## INTRODUCTION

In a surprisingly short period of time the primary source of economic output in developed countries has evolved from agriculture to manufacturing to services to today's significant shift into an information economy (Karmakar & Apte, 2007). High quality and timely information has always been an important component of economic and social life, and the collection, manipulation, and control of information has been seen as a source of competitive advantage over other organizations (Porter & Millar, 1985).

Industries whose primary output is information itself rather than physical goods have risen to dominate the economic landscape.

These industries include banking and credit agencies, security and commodity brokers, insurance carriers, holding and investment offices, business services, legal services, central administrative and government offices, and so on. These information-intensive and information-dependent industries have been major consumers of information technology (IT), traditionally used for process integration and optimization, service bundling, and economies of scale (Nehmzow, 1997). These "inward looking" IT projects were justified

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solely on the basis of return on investment with direct cost savings and higher productivity (Clemons & Weber, 1990). Far from being a strategic advantage, IT was a strategic necessity. In order to transform IT from a strategic necessity to a strategic advantage a radically new technology and new strategic philosophy needed to be developed. Enter the “outward looking” information technology of the Internet.

The introduction of a new, breakthrough technology carries with it tremendous opportunity. Organizations that can “get there first” and exploit the new technology can achieve and maintain a strategic advantage over later entrants (Porter & Millar, 1985). Organizations that wait and do not adopt the new technology lose market share, are seen as technologically backwards, and risk failure (Tushman & Anderson, 1990).

For the first mover, any new technology also carries with tremendous risk. First movers bear the costs of initial development, user training, and convincing potential customers of the advantages of their product. Second movers can take advantage of significant incremental advancements based on the original innovation. For information technology-driven industries, followers win (Hidding, Wilson, Williams, & Kuncheria, 2008).

Organization management has an important strategic decision to make: gain a strategic advantage by embracing a new technology with substantial risk, or gain a strategic advantage by waiting for superior follow-on technologies. Despite the importance of this decision, academic literature has been unable to provide conclusive empirical evidence to support or refute the existence of first mover or second mover strategic advantage or even of any strategic disadvantage to being a first mover or a second mover (Suarez & Lanzolla, 2007).

This paper is a longitudinal study that examines a set of homogeneous medium-sized information-intensive and information-dependent organizations as they pursue the four possible strategies: adopt (or do not adopt) a new, outward-looking information technology when it is first introduced, or to wait and adopt (or

not adopt) the technology after the technology has matured. It addresses the question, is there a first-mover strategic advantage (or disadvantage) or a second mover strategic advantage (or disadvantage)?

## BACKGROUND

Credit unions are the cooperative not-for-profit branch of the banking industry. The goal of a credit union is generally not maximizing shareholders’ wealth as in the standard theory of the firm, but rather maximizing its members’ benefits. The services that credit unions can offer members are limited by federal charter, so credit unions can be easily compared to each other with the vast majority of these services being variations on deposit and loan instruments. In addition, all US credit unions are required by law to report financial results, management actions, and the use of information technology. They are information intensive and are highly dependent on information technology. Their primary operational task is to track the flow and storage of (primarily digital) money to and from its members. With a relatively low level of complexity, highly substitutable business processes, and a high degree of visibility in their usage of IT, credit unions are excellent organizations to examine the of value of information technology.

### Hype and the Visible Information System

Information technology has emerged from being an invisible component of organizational infrastructure to being a highly visible service provider as well as a shaper of public opinion about that organization. From early financial and accounting systems to strategic inter-organizational integrated supply chain systems, organizational IT has been invisible to the outside world. While the power of IT and the breadth and depth of information available to the organization has increased exponentially, few outside of the organization’s information systems group are excited about these invis-

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