

Chapter 16

A Socio–Technical Study of the Adoption of Internet Technology in Banking, Re–Interpreted as an Innovation Using Innovation Translation

Salim Al-Hajri

Higher College of Technology, Oman

Arthur Tatnall

Victoria University, Australia

ABSTRACT

This article presents a re-interpretation of research done in the mid-2000s on uptake of Internet technologies in the banking industry in Oman, compared with that in Australia. It addresses the question: What are the enablers and the inhibitors of Internet technology adoption in the Omani banking industry compared with those in the Australian banking industry? The research did not attempt a direct comparison of the banking industries in these two very different countries, but rather considered Internet technology adoption in Oman, informed by the more mature Australian experience. The original study considered Internet banking as an innovation and used an approach to theorising this innovation that was based on Diffusion of Innovations and the Technology Acceptance Model (TAM). Given the socio-technical nature of this investigation, however, another approach to adoption of innovations was worth investigating, and this article reports a re-interpretation of the original study using innovation translation from actor-network theory (ANT).

DOI: 10.4018/978-1-4666-2166-4.ch016

INTRODUCTION

In developed countries such as Australia, Internet technologies have been strongly embraced by the banking industry and for many years banks have pursued strategies to encourage their clients to engage in Internet banking. For some time Oman has been committed to economic growth but by the mid-2000s had a banking industry that was yet to embrace Internet technology. The study discussed in this article set out to determine inhibitors and enablers to the adoption of Internet technology in the banking industry in Oman, and to inform this by the more mature Australian experience. The original study used a theoretical framework based on the theory of Diffusion of Innovations and the Technology Acceptance Model (TAM). It was conducted in 2005 as a doctoral thesis at Victoria University (Al-Hajri, 2005) and involved in-depth interviews with a sample of bank managers at strategic, tactical and operational levels in both Oman and Australia.

There are, of course, huge cultural differences between Oman and Australia and a direct comparison of the two was not the intent of this research project. The backgrounds, economics, societies and indeed the very way of life in the two countries are all very different. Australian banks had already adopted Internet technologies whilst Omani banks were just beginning to do so. In developed countries such as Australia, Internet technologies have been embraced by the banking industry for some time and bank clients have been encouraged to engage in Internet banking (Al-Hajri & Tatnall, 2008), but while Oman is a developing country committed to economic growth, in 2005 its banking industry had not adopted Internet technology to any great extent.

THEORETICAL FRAMEWORK

It has been suggested that "... explaining human behavior in all its complexity is a difficult task"

(Ajzen, 1991, p. 179). Further to this we will argue that the main complexity in understanding Internet technology adoption behaviour, or the lack of it, within the context of the banking industry in Oman (a non-adopter) and Australia (an adopter) is that this involves people such as bank managers and customers, and that people behave in very different ways.

Innovation can be defined as: "the alteration of what is established; something newly introduced" (Oxford, 1973) or "introducing new things or methods" (Macquarie Library, 1981). Whereas invention refers to creating and building new artefacts or the discovery of new ideas, innovation involves making use of these artefacts or ideas in commercial or organisational practice. (Maguire, Kazlauskas, & Weir, 1994). Just because a new technology has been made available does not mean that it can be assumed that organisations or individuals will want to adopt or use it, and even if an organisation does adopt a new innovation, it cannot be assumed that its employees will be prepared to use it. In deriving a framework for the original study, four existing research frameworks were considered: The Theory of Reasoned Action (TRA), The Theory of Planned Behavior (TPB), The Technology Acceptance Model (TAM) and Diffusion of Innovations.

The Theory of Reasoned Action (TRA)

Fishbein and Ajzen (1975) originally developed the Theory of Reasoned Action (TRA) in 1975, before later comprehensively refining it with empirical evidence to support its validity and reliability (Ajzen & Fishbein, 1980). Their study focused on three major determinants of an individual's behaviour: Behavioral Intention, Attitude and Subjective Norm. TRA assumes that "... human beings are usually quite rationale and make systematic use of the information available to them" (Ajzen & Fishbein, 1980, p. 5). This assumption is important because it indicates clearly

12 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:
www.igi-global.com/chapter/socio-technical-study-adoption-internet/70840

Related Content

Graph-Based Semi-Supervised Learning With Big Data

Prithish Banerjee, Mark Vere Culp, Kenneth Joseph Ryan and George Michailidis (2017). *Handbook of Research on Applied Cybernetics and Systems Science* (pp. 154-185).

www.irma-international.org/chapter/graph-based-semi-supervised-learning-with-big-data/181102

Innovation Processes of Cymbopogon Citratus Tea in Manipur, India: An Actor Network Theory Perspective

Wairokpm Premi Devi and Hemant Kumar (2016). *International Journal of Actor-Network Theory and Technological Innovation* (pp. 10-25).

www.irma-international.org/article/innovation-processes-of-cymbopogon-citratus-tea-in-manipur-india/175309

Shared Cybersecurity Risk Management in the Industry of Medical Devices

Maria Lai-Ling Lam and Kei-Wing Wong (2021). *International Journal of Cyber-Physical Systems* (pp. 37-56).

www.irma-international.org/article/shared-cybersecurity-risk-management-in-the-industry-of-medical-devices/308268

Exploring the Implications of Complexity Thinking for the Management of Complex Organizations

Kurt A. Richardson (2010). *Cybernetics and Systems Theory in Management: Tools, Views, and Advancements* (pp. 36-51).

www.irma-international.org/chapter/exploring-implications-complexity-thinking-management/39321

Modeling Associations: Sensor Fusion and Signaling Bar Codes

James K. Peterson (2017). *Handbook of Research on Applied Cybernetics and Systems Science* (pp. 115-152).

www.irma-international.org/chapter/modeling-associations/181100