

Chapter XIX

Factors Affecting Broadband Adoption for Mainstream Consumers

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ABSTRACT

This chapter explores whether past experiences with telecommunications providers and current 'plans' on offer serve as barriers between an individual consumers' persuasion phase of the Innovation-Decision Process (Rogers, 2003) and the decision phase. With broadband in around 33% of Australian homes, it is important that telecommunications providers understand why the future mainstream segment of consumers will want to adopt broadband, and any barriers to this. This analysis suggests future studies are needed to investigate whether the telecommunications providers are collectively confusing potential broadband consumers in their attempts to differentiate a generic product in the market. It argues that future technology adoption studies need to consider including the complexity of the actual purchase decision when developing constructs for quantitative models. If we are to build a picture of why mainstream consumers adopt broadband, more than just the perceptions of using the technology itself need to be investigated.

INTRODUCTION

There is no simple explanation as to *why* one household installs broadband Internet and another chooses not to. While economic variables like price change over time and demographic distributions of income among a population will often correlate with the diffusion of an innovation, these correlations do not help us explain *why* members of the population under study adopt. These economic and demographic descriptions become even less useful as we move through the traditional diffu-

sion curve and study the mainstream segment of the population.

Key literature across four disciplines (information systems, sociology, psychology, and consumer behavior) underpins the discussion and study presented in this chapter. The majority of the technology adoption literature in the information systems area can trace its roots back to sociology and psychology studies. Work in the areas of innovation diffusion theory (Rogers, 2003), the theory of planned behavior (Ajzen, 1991), and the theory of reasoned action (Fishbein & Ajzen,

1975) are the building blocks for most technology adoption studies in the information systems literature. The majority of technology adoption research has studied workplace adoption intention and not issues specific to household consumers, while most existing broadband adoption studies have primarily concentrated on economic and demographic descriptions of adoption (Madden & Coble-Neal, 2005; Choudrie & Dwivedi, 2005a; Cameron, 2004; Roy Morgan, 2003; Madden, Simpson, & Savage, 2002; Hausman, Sidak, & Singer 2001). The participants in the study outlined here discussed what technologies they found useful in their lives from the perspective of the household consumer. The transcripts were analyzed for both emerging themes and in the context of findings from existing studies.

This chapter argues that future technology adoption studies need to investigate in more breadth and depth the role complexity of the purchase decision plays in acting as a barrier to adoption. Qualitative longitudinal studies of a purposive sample of households would provide more depth to this issue, while quantitative studies should consider including the complexity of the actual purchase decision when developing broad consumer technology adoption models. Building a picture of *why* mainstream consumers adopt broadband requires more than just investigating either their perceptions pre-adoption of the technology itself, or post adoption of using the technology. The critical issue is: what is the tipping point (Gladwell, 2002; Adams, 2005) which takes them from the persuasion to the decision phase (Rogers, 2003) in purchasing new technology for their household?

LITERATURE OVERVIEW

There is much common ground in the studies of innovation and technology adoption in the fields of information systems, consumer behavior, psychology, and sociology. This study approached the issue from an information systems perspective initially through the lens of the following technology adoption models: the technology adoption model (TAM) of Venkatesh and Davis (2000) and Davis (1989);

the unified theory of the adoption and usage of technology (UTAUT) of Venkatesh, Morris, Davis, and Davis (2003); and most recently the model of adoption of technology in households (MATH) of Brown and Venkatesh (2005). The origins of these models can be traced back to the sociology work of Rogers (1962, 2003) with his innovation diffusion theory (IDT), and two theories from the psychology discipline: the theory of reasoned action (TRA) of Fishbein and Ajzen (1975) and the theory of planned behavior (TPB) of Ajzen (1991).

Work across several disciplines (Rogers, 2003; Moore, 2002; Bass, 1969; Mahajan, Muller, & Bass 1990) show social factors and social influences have a stronger influence on mainstream consumers than on the innovators or early adopters. Rogers' (2003) work from a sociology perspective is the best known of these, and he describes five attributes of innovations which can be studied in trying to predict their rate of adoption. In addition Rogers describes a five-stage process he calls the Innovation-Decision Process (2003, pp. 174-179). The second of these stages is 'persuasion', where the innovation's characteristics influence the formation of a favorable or unfavorable attitude towards the innovation, before the next 'decision' phase of adoption or rejection (see Figure 1).

The process from the persuasion to the decision stage in Rogers' (2003) Innovation-Decision Process (see Figure 1) is the specific area of interest for the research outlined here. In the popular press Gladwell (2002) has described this transition as the 'tipping point.' He outlines how some ideas and products spread like viruses or epidemics, while others fail to gain any traction. Moore (2002) describes technology 'mainstream' consumers as wanting the 'whole product,' where the generic product fits with their expectations, but also provides the add-ons (peripherals, support, interoperability), as well as seeing some future potential for satisfying their growing needs. In developing a model of consumer adoption of technology, the idea of matching both current and perceived future needs is important. A more general view of consumer influence is provided by Cialdini (2001), a psychologist. He sees the six principle categories of influence as: reciprocity, consistency, social

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