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*Is choice a bad thing for broadband consumers?*

**Abstract**

This paper discusses whether consumers are overwhelmed by the amount of choice they have when considering a broadband Internet connection. Although it references some preliminary work from a qualitative study it is primarily a theoretical discussion seeking to propose new directions for research into broadband adoption by consumers.

Technology adoption studies in the information systems discipline have been dominated by models developed to study workplace adoption, which do not consider the role of the purchase process in the adoption decision. Participants in this study described the complexity of trying to make a purchase decision and being overwhelmed by the amount of choice available from telecommunications providers. A further review of the literature found support for choice being a barrier for some people in making a purchase decision.

A shift in the focus of research to understanding *why* the mainstream segment of the market adopt broadband, will help regulators, governments and the telecommunications providers understand the broader issues of ensuring consumers are able to make a viable choice suitable to their needs. This paper 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.

Key words: adoption, broadband, diffusion, communications technology, consumer behaviour, model, UTAUT, MATH, TAM, CAIT.

## Introduction

Australia is at a really interesting point in time in the adoption of broadband Internet. Of our 7.8 million households, approximately one-third have broadband connected, one-third have a dialup Internet connection, and one third do not have Internet access (ACCC 2006; ACMA 2005; ABS 1999). For the telecommunications providers, they are now dealing with a different type of customer who may be looking to install a broadband Internet connection. We are now into the mainstream segment of the market; these customers are conservative by nature and have different motivations from the early adopters (Rogers 2005; Moore 2003).

This paper outlines the key findings from an exploratory study of household consumers, where four focus groups were convened to discuss the issues of technology in the home. Participants described the complexity of trying to make a purchase decision and being overwhelmed by the amount of choice available from telecommunications providers. This is not surprising given the amount of companies competing for market share and trying to differentiate themselves around a common commodity in broadband Internet. Web sites like Broadband Choice commonly list over 135 different broadband plans<sup>1</sup>, even for those living in regional areas. A further review of the literature found support for choice being a barrier for some people in making a purchase decision. It is suggested future studies on broadband adoption should investigate in more depth how mainstream consumers gather information on broadband Internet and the role choice plays in making the final purchase decision. The findings of this research would assist telecommunications companies deliver their marketing messages in ways which can be understood by the mainstream segment of the likely adopting population for broadband; while governments and regulators can shape the policy environments to ensure consumers are provided with clear unambiguous information in advertising.

## Literature overview

In recent years some researchers in the information systems discipline have started to develop models of technology adoption specifically looking at the household, building on 20 years of research on technology adoption in organisations. These new models, like Brown & Venkatesh's (2005) MATH (Model of Adoption of Technology in Households), build on the constructs developed in the organisational models of adoption such as UTAUT (Unified Theory of Acceptance and Use of Technology) (Venkatesh et al. 2003) and TAM (Technology Acceptance Model) (Venkatesh & Davis 2000; Davis 1989).

Although MATH considers *fear of technological advances* and the role of *cost* in shaping *behavioural intention*, the role of the complexity of the purchase process (Adams 2006) itself is not considered in shaping intention. Broadband is a technology which is likely to have some unique idiosyncrasies when it comes to households considering taking up a subscription. It would be dangerous to assume a model like MATH, which was developed from studying personal computer adoption, would automatically apply to broadband.

When we consider one-third of Australian households currently have a broadband Internet connection, the concept of critical mass is an important consideration, as has been shown for innovations such as the fax machine and videoconferencing (Rogers 2003, pp.343-351). Rogers' describes critical mass as being particularly important

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<sup>1</sup> <http://bc.whirlpool.net.au/>, to see how many plans are available where you live (in Australia), enter your telephone number, and use the Plan Search option using the default settings

with interactive innovations, because those who have currently adopted benefit from each later adopter. For example, your fax machine becomes more useful as more people purchase fax machines and you can interact with them; Markus (1987) calls this reciprocal interdependence and Mahler and Rogers (1999) discuss this concept in terms of network externalities. When we look at the profiles of mainstream consumers as defined by Rogers' bell curve (Figure 1), they are split into two even groups, the *early majority* and the *late majority*.

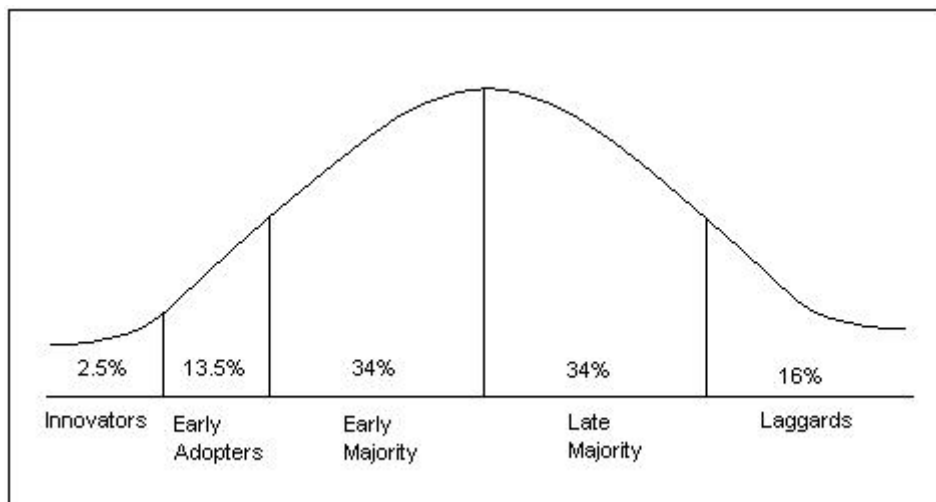


Figure 1 – The non-cumulative adoption of innovations by adopter category over time (Rogers 2003, p.281).

Moore (2002) sees the early majority as the pragmatists who like standards others are using, they are hard to win over, but loyal once a customer. He sees the late majority as conservatives who will not tolerate high price margins and argues they have been ignored by the technology companies historically, although through volume they offer opportunities.

For the telecommunications companies the mainstream market may not have the profit margins of the early adopters, but this segment represents 68% of the adopting population and through volume is an opportunity to amortise the research and development costs used in building the market for the early adopters. The key is the offering cannot be static as the market moves through the diffusion curve and an increasing level of simplicity and service needs to be built in as the market matures (Moore 2002, p.43-51).

Most of the work studying broadband is around demographic descriptions of those who adopt (ACMA 2005; Choudrie & Dwivedi 2005a; Cameron 2004; Roy Morgan 2003) or economic studies modelling predicted adoption (Madden & Coble-Neal 2005; Madden, Simpson & Savage 2002; Hausman, Sidak & Singer 2001; Madden & Simpson 1997). With much of the study of innovation focussing on what drives the early adopters, it is important to realise once the critical mass has been passed and the mainstream segment of the market is reached “demographics lose their ability to discriminate in regard to product adoption” (Li 2004, p.179). Modahl (2000, pp.48-49) divides the mainstream into two broad categories: the low income optimists; and the high income pessimists. She argues if you looked at the demographics of a group of high income earners, there is no difference between the optimists (who are the early adopters) and the pessimists (who are in the mainstream). The work done by Li (2004) and Modahl (2000) demonstrates the need for information systems research to look at alternative approaches from the dominance of survey based

studies (Choudrie & Dwivedi 2005b), in order to understand the drivers and barriers to the adoption of broadband Internet.

## Methodology

Focus groups provide a rich source of data which extends the pre-conceptions the researcher has about the area under study. Interaction amongst group members leads to discussion which would not arise in an interview situation (Smithson 2000, p.116). Exploring the themes from focus groups requires careful consideration of the data in context, and how the facilitator managed the discussion (Warr 2005; Morgan 1988). For example, during this research the groups were discussing using the Internet for shopping and one participant said:

*F: See I don't do my shopping on the net, never have.*

Taken on face value, this statement could be used to support a line of argument about why people don't shop on the Internet. After probing a bit deeper, the final interaction in context implies something totally different:

*F: See I don't do my shopping on the net, never have.*

*Q: So even with the comparative stuff that we talked about earlier, with your laptop for pricing?*

*F: Sorry. I did compare yeah, that would probably have been the first time. And I guess I comparative shop. I meant shopping as in other stuff.*

From this it is clear using the Internet was an important stage in the purchase process, even if the goods were not directly purchased online in the final transaction. This example shows both the potential weaknesses in focus group data if it is not carefully analysed and the strength of the data in being able to explore the meaning behind comments. If a survey approach was taken, it is likely this person would have answered "No" to a question similar to "Do you use the Internet for shopping?", and we would have been no wiser about the online 'comparison phase' in the purchase process.

## Findings

Often the tipping point (Adams 2005; Gladwell 2002) for the adoption decision for broadband comes down to a straightforward decision on price. The 'selling points' of higher speed and not tying up your phone line are just a bonus post purchase, not a driver to make the adoption decision:

*P: I didn't actively seek it out either but I'm now connected. But for me there was no extra cost between dialup and broadband and that was the only reason I went. I don't, I also don't really understand the technology.*

The mainstream segment of the market is conservative and like their purchases to be as hassle free as possible (Moore 2002, pp.52-53; Modahl 2000, pp.47-63):

*P: I think that's key. Fitting it into your budget for one thing. And it's not taking the latest and greatest in technology. Its wait until it's bedded down to some degree.*

The increasing availability of mobile broadband services pitched at consumers is likely to broaden the current market and will appeal to those who lead a transient

lifestyle, but so far haven't been convinced of the value of broadband Internet in their lives:

*M1: Up until now I've been living a fairly mobile lifestyle not living in a constant, one spot, and working in one spot so wherever I shift around to, there's no computer on the other site, so I haven't really developed the habit of getting on the Internet to have a look and just browse and see what's coming on.*

Even for those who profess to want to know more, the currently available information may not be pitched at a level they can easily digest. Participants collectively reached the view, that in an ideal world, they would have someone they could turn to for advice on technology issues:

(1)

*J: There's too many different variables. You can't compare them. Like [participant's name] was saying, apples and apples. There is so many different things that was, it's too hard to compare.*

(2)

*J: ...like we go up to Telstra and places and take the information that they give me. I take it home and read it. I read anything in the papers that I can about it, to find out about it. Any sort of, and any time that I find anything around I'll take it home and read it. But a lot of the information, you don't seem to be able to get the information that you want.*

*B: And I'm going out to the stores and talk to the people that are selling them and of course then they're usually biased towards what they're saying and I was, we're looking at the idea of using our mobile phone and a lap top computer when we were sort of caravanning. And as soon as you mention that they virtually sort of, it will cost you, it will cost you. They don't really tell you ....*

*J: ... cost you or is this a better option. So nobody out there has information. ... I would like to have, here have the financial advisors. Love to have a technology advisor.*

*V: Exactly.*

The discussion of the contribution of advertising in the information gathering stage tended to be fairly negative:

(1)

*J: ...I've been trying to find information but all I hear is advertising. It's content free advertising.*

(2)

*F: I find all of that marketing so confusing.*

It is recognised that often advertising is about building awareness and branding, but the telecommunications companies do not want their potential customers to build a negative image based on their marketing activities. Often the potential customer has essentially made a decision to commit to buying the technology (like broadband), but the final step of making a decision is too difficult to warrant following through with the purchase, or at least making an informed decision:

(1)

*F...trying to sift through plans just leaves me cold.*

(2)

*M1: ...comparing plans with plans. It's like just, it's so immensely broad that I don't, I find unless you've got a very solid knowledge ..., to have a useful comparison ....*

Most households in Australia have in excess of 135 broadband plans available to them. In assessing this huge range of choices consumers draw on a range of past experiences, as well as perceptions, and are likely to filter the information in alternate ways based on individual personality characteristics.

*P: If it was a name that you've never heard of before you'd be questionable on what it's going to be. And then a sort of a breakdown of how big are they, and then do you think, well are they just ripping you off because they are big?*

For the mainstream market simplifying the options, like the bundling of services, often helps in the decision process:

*C: I started with Optus, I looked at 3 or 4 others in the end it's I've got the home phone, long distance and local with Optus, I've got the mobile with Optus and they said well if you bundle it all you get one month in 3 free which means that affectively I've gone from a really average dial up plan to 12 gig a month which is heaps at the moment 12 gig a month broadband plan I think it's about \$17 a month more than I'm paying for it. In the end it came down to price, Primus couldn't promise me anything extra, Telstra I'll admit now I didn't look at because I had a really bad run in with them about 5 or 6 years ago when they illegally actually shunted me from another carrier to them so I'm just not going to deal with them period. I looked at a couple of others.*

The importance of reliability and service came through often in the context of making purchases of technology items for the home. Mainstream consumers have long memories about negative experiences:

*F: ...we looked in the shop and I said I'm not going to buy a Toshiba. Why wouldn't you buy a Toshiba? Because we had a Toshiba cassette player years ago and the wretched thing kept breaking down.*

For those still to adopt, there is suspicion they are being forced down the broadband path.

(1)

*M1: Is it that they are either phasing the old technology out because there's a higher money earner in something else. Or it's a very good way of making money and for those silly enough to still be on the dialup, then we'll just keep charging them.*

(2)

*J: And that goes back to my point, where I think that the companies have the control to faze out something that's old by driving everybody to distraction, to bring them online at some higher priced product.*

(3)

*R: That's what I've noticed as well, is that lately my dialup connection is dropping out more frequently.*

The issues of frustration, trust and the complexity of making a purchase decision, all serve to act as barriers for those individuals who are already predisposed to be conservative and like making considered choices in their purchase decisions.

## Discussion

There is a range of work in the psychology and marketing literature supporting this idea of personality traits playing a strong role in the purchasing decision for some consumers. In particular work by Barry Schwartz in the area of consumer choice shows people have an inbuilt personality trait to fall somewhere along a continuum from *maximizing* to *satisficing* when making purchase decisions. Although traditional economic approaches to consumption are underpinned by the assumption consumers make rational choices (von Neumann & Morgenstern 1944 cited in

Schwartz et al. 2002), there has been increasing recognition that people have a threshold of acceptability, which once met, allows a purchase decision to be made (*satisficers*). The further a person is along the continuum towards being a *maximizer*, the less likely they are to be able make a decision without experiencing regret over the alternatives they had to forgo (Schwartz 2004; Schwartz et al. 2002).

This work is particularly salient when we are talking about the current broadband market in Australia. The non-adopters from the mainstream segment have already shown themselves to not to be convinced by the allure of always-on Internet. So the two questions to be asked are: 1. Are they interested in broadband, but can't make a decision?; & 2. If so, what are the barriers to making this decision?

Schwartz et al. (2002) cites work by Iyengar & Lepper (2000) where participants were given a choice of exotic jams. When there was less choice (6 options) they were more likely to purchase, than when they had a choice of 24 jams. Probably most interesting was the fact that those who had the fewest options, expressed the most satisfaction with their choice. They suggested possible reasons for this finding were: when we have more choice, we feel a level of regret about the options we 'missed out' on; and, as the number of options increase we suffer from "a seemingly intractable information problem" which may result in us "disengaging" from the process (Schwartz et al. 2002, p.1179). Following this line of enquiry in relation to broadband adoption is likely to provide useful insights into the motivations and barriers for the mainstream market.

### **Future directions for research**

For the telecommunications providers, governments and regulators, the key issue is to pitch the communications message about broadband to this mainstream market differently from what it has been up to this point. The difficulty is how do you convince 135 plus providers of broadband to simplify their message down to, say, six common offerings so an average consumer can make an informed decision and be satisfied with it?

There is a body of research dating back to Hardin (1968 cited in Rogers 2003, pp.349-350) which investigates the "tragedy of the commons" when individuals (or in this case the telecommunications companies) pursue what is a rational course of action for themselves, but it causes the entire system to fail.<sup>2</sup>

This exploratory study was designed to broaden the traditional approaches which have dominated technology adoption studies in the information system literature. The emerging themes discussed here require further investigation through research such as longitudinal studies of households who are yet to adopt broadband.

We are past the need to be able to predict who the early adopters of broadband might be. Now we are clearly entrenched in the mainstream market, future research needs to shift the focus to providing a deeper understanding of what the needs and motives are of the potential adopting households.

The Smart Internet 2010 report articulates multiple visions of how Internet technologies can help shape our future society. But warns "...users ought to be

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<sup>2</sup> The name comes from the shared pastures (commons) of Medieval Europe. For example, if each farmer decided to increase their herd of 10 by one cow (a rational decision for them), then shared common pasture could not sustain the increase in the overall number of cows. This problem eventually led to fencing of individual plots.

central to the strategic thinking about what kind of Internet might emerge by the year 2010” (Barr, Burns & Sharp 2005, p.23). Clearly, if Australia is to have any chance of moving towards the broad visions outlined by reports such as this, then ubiquitous broadband access is critical infrastructure. The current split of households into thirds between those with broadband, those with dial-up and those without Internet access, is obviously not a basis from which to build a future society where key services are to be delivered by broadband Internet.

### **Conclusion**

A shift in the focus of research to understanding *why* the mainstream segment of the market adopt broadband, will help regulators, governments and the telecommunications providers understand the broader issues of ensuring consumers are able to make a viable choice suitable to their needs. This research stream can inform regulators and governments at a policy level; and assist the providers in shaping their marketing messages in a way which is informative, as well as communicating the sales pitch. If we continue down the path of all providers acting only towards their individual goals, the danger becomes the competing advertising messages collectively confuse the mainstream market and result in potential customers disengaging from the process of considering to install broadband Internet in their household. This would not only be a tragedy for the telecommunications providers, but for all who see telecommunications access and infrastructure as critical to our growth as a society.

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