

Chapter 2: Literature Review

2.1 Objectives of the literature review

The objective of this literature review is twofold. Our first goal is to review the existing literature from Choi et al's study and to digest and critique what they have found. Secondly, our objective is to identify any possible developments or improvements to the existing research in order to improve the quality of the study or to suit it to the current context.

We have already described above the objective of the study. The literature review has been done to provide a justification for our assumptions and actions – why we have chosen certain constructs and decided to build the hypotheses that we did.

We start off with a discussion of our initial findings. We then settle on the main theories based on our initial survey of existing literature and research, and drill deeper from there to help us get more clarity on the constructs to choose and the hypotheses to build.

At the end of the literature review, we will have provided a foundation to base our construct and hypothesis development on, after which we present our hypotheses.

2.2 The Theory of Reasoned Action/Theory of Planned Behaviour

As we have already seen above, the research question revolves around studying user behaviour, in our case the behaviour of the user when interacting with a fee-based online content service. We have thus chosen user behaviour to be the initial concept to help guide us in the right direction.

As already discussed, a review of research projects studying user behaviour points us in the direction the Theory of Reasoned Action and the Theory of Planned Behaviour. These two theories form the bases for a large number of studies revolving around the study of user behaviour, especially in the field of online activity (Khalifa and Ning Shen, 2008; De Cannière et al, 2009; Lin et al, 2006; Pavlou and Fygenson, 2006).

Icek Ajzen and Martin Fishbein put forward the Theory of Reasoned Action in 1980 (Ajzen and Fishbein, 1980). This theory attempted to identify the factors that most influenced a user's behaviour, and is one of the most commonly used theories when studying user attitude and behaviour. It assumed that a user's *intention* to perform a certain action is closely linked to the actual performance of the action itself, and posited that intention is an immediate antecedent to the actual behaviour. The stronger the user's intention, the greater the likelihood that the behaviour will be performed (Ajzen and Madden, 1986). Thus, if we can determine the factors influencing intention, we can measure the likelihood that the action or behaviour will be performed.

The two constructs laid out by the TRA as being influencers of user intention were the user's attitude towards the act or the behaviour, and subjective norms or the social pressure that the user felt to perform the given action (Ajzen and Madden, 1986).

In the case of this study, we're dealing with the use of an online content service, which now becomes our action. Working backwards, we want to find out what will influence the user's intention to use a specified online content service.

The TRA thus fits in quite well in our search for a framework for the measurement of intention. We will now look at these constructs in further detail.

2.2.1 Attitude towards the behaviour

The user's attitude towards a given behaviour is related to their beliefs about the consequences of performing that behaviour and their evaluation of those consequences. What they think of the attitude of individuals close to them is related to their perception of their beliefs about the consequences of performing the action and their perception of their evaluation of those consequences (Ajzen and Fishbein, 1972).

The attitude of a user towards behaviour is influenced by behavioural beliefs. Each behavioural belief links the behaviour to a certain outcome as a result of performing the behaviour. The value of this outcome then contributes to the attitude toward the behaviour (Ajzen and Madden, 1986).

In order to predict the intention, the TRA posited that this can be determined by measuring the attitude of the user towards the behaviour and the subjective norms or social pressures on the user to perform the said behaviour. If we can measure these two parameters, we can then get a measure of the user's intention to perform the behaviour, and thus the likelihood that this behaviour will be performed.

2.2.2 Social factors or subjective norms

The other determinant of intention as proposed by the Theory of Reasoned Action is "subjective norms" (Ajzen and Fishbein, 1980) – this is described as the social pressure to engage in a particular kind of behaviour.

These subjective norms or beliefs are determined by normative beliefs, which are concerned with the likelihood that the individuals or groups important to the user will approve or disapprove of the behaviour. There may be more than one normative belief, and collectively, these normative beliefs determine the amount of pressure an individual feels to perform or not perform behaviour. (Ajzen and Madden, 1986).

Contrary to what Ajzen has prescribed though, Mathieson's research (Mathieson, 1991) did not find a significant contribution of social factors to the behavioural intention of the user, though Venkatesh and Davis did theorise that this was perhaps because subjective norms had a direct effect on mandatory usage – when the user had no choice in the use, but not so when usage was voluntary (Venkatesh and Davis, 2000) – i.e. when the user had an open choice as to whether or not perform a certain behaviour.

The notion that a user feels pressure to behave in a certain way because of other individuals leads us to question the user's motivation to choose a particular system. Further research into this area leads us to a discussion on intrinsic and extrinsic motivational factors.

Intrinsically motivated content is content whose importance is not necessarily driven by an external factor – such as work, or decision making, or even peers. It is something that is enjoyable because of what it is, whereas extrinsically motivated content consists of content that is consumed because of some extrinsic factor (eg: the knowledge will help them do their job better, or it will improve their image at work, it will get them social status) (Lopes and Galletta, 2006). The user may thus be extrinsically or intrinsically motivated (Ryan and Deci, 2000).

In the section dealing with different types of content, we will discuss the classification of content and present our views in more detail.

2.2.3 Perceived behavioural control

The TRA predicts behaviour by measuring intention based on the two constructs described above. And though the theory has found support in a number of studies (Ajzen et al, 1982; Smetana and Adler, 1980; Bentler and Speckart, 1979; Fredricks and Dossett, 1983), one of the areas that it did not succeed in providing satisfactory explanations is related to the theory's boundary conditions, mainly to do with the transition from verbal responses to actual behaviour (Ajzen, 1991).

One of the conditions for the TRA to predict behaviour is that the user must be in complete volitional control of the behaviour i.e. the user must be able to decide at will whether or not they want to perform the behaviour in question. If the user did not have complete control over the behaviour, then the TRA failed (Ajzen and Madden, 1986). A user's behavioural control could be limited by such factors as money, time, resources or the co-operation of others. Ajzen addressed this issue of control by proposing the Theory of Planned Behaviour, in which behaviour was predicted, based not only on intention but on behavioural control as well i.e. the amount of control that a user has on the behaviour.

It is however difficult to measure the actual behavioural control that a user has because of the practical difficulties in assessing skill and accidental, unanticipated changes in circumstances which change the degree of behavioural control the user possesses. Based on studies revolving around the self-efficacy theory, it was found that people's behaviour is strongly influenced by their confidence in their ability to perform it (Bandura et al, 1977 and Bandura et al, 1980 in Ajzen, 1991).

Thus, according to the Theory of Planned Behaviour, perceived behavioural control along with behavioural intention, can be used to directly predict behavioural achievement (Ajzen, 1991).

However, perceived behavioural control may not be realistic when a person has little information about the behaviour, when requirements or resources have changed, or when unfamiliar elements have entered the situation (Ajzen, 1991).

Also, a strong effect of perceived behavioural control is expected only when the behaviour in question is not under complete volitional control, in which case the TPB reduces to the TRA (Ajzen and Madden, 1986). Further, when there are no serious problems of control, intentions alone are sufficient to accurately predict behaviour (Ajzen, 1991).

The third determinant of intention prescribed by the Theory of Planned Behaviour is Perceived Behavioural Control (Ajzen and Fishbein, 1980). This is the construct that differentiates the TPB from the TRA (Ajzen and Madden, 1986).

In the case of our study using fee-based online content, in practical terms, the respondents are already familiar with using the internet, are comfortable with email and answering online surveys (since this is the sole data collection method), they have access to the internet and are accessing content online as well, thus removing the skill and resource barriers. There is the question of money however which can be considered to be a factor limiting behavioural control, since the availability of money can be an issue. It seems however to be the only such limiting factor. Also, considering that for this study "fee-based online content" is restricted to mainly entertainment and information-type content which are of relatively little cost anyway, it can safely be assumed that for this audience, the small amount of money involved is not really a limiting factor.

In the absence of any serious threats to performing the factor, we can assume that the perceived behavioural control will not play an important role in predicting the user behaviour, and intention alone will be sufficient.

In the event that fee-based online content includes high-priced items, the user's volitional control does decrease. It might mean that the user does not have the money, or for B2B content, the user needs the approval of an official higher up to approve expenditure for access to that content service. In such a situation, the perceived behavioural control would play a more important role in predicting the user-acceptance of fee-based online content.

2.3 The Technology Acceptance Model

The Technology Acceptance Model or TAM has evolved as one of the most widely used theories in the study of Human-Computer Interaction. Fred D Davis and V Venkatesh put the Technology Acceptance Model forward in 1980. The TAM is an adaptation of the TRA, but repurposed specifically so that it can be used to predict computer usage.

The TAM proposes that application or system usage is predicted by ease of use and perceived usefulness. It is based on findings that these two factors influence the attitude of the user, which in turn is a determinant of the behaviour (i.e. usage) of the system.

The TAM has been extended and revised by many other researchers to suit their respective research purposes, and the model itself has formed the basis of many other studies.

2.3.1 Perceived usefulness

Similar to the “Attitudes” construct in the TRA, the perceived usefulness in the TAM also deals with the attitude of the user towards the system, and focuses on the perceived consequences or outcomes as a result of using the system.

The concept of perceived consequence is developed from perceived usefulness (Davis, 1989). In the case of paying for content online, the new system that is being introduced is the system wherein one has to register and gain access to the content – a barrier to prevent further access to content without first completing an action – that of registering or putting payment details through. According to TAM, the user will only go through with this if they perceive the rewards of the action to be greater than the effort required to obtain it (Davis, 1989).

Other studies involving the TAM have already shown that perceived usefulness was more influential than ease of use in determining usage (Davis, 1993). This has been shown to hold true in other studies as well (Lin, 2006 and Davis et al, 1989).

Studies on the customers of a Greek bank (Rigopoulos and Askounis, 2007) have shown that the user-acceptance of electronic payment systems was directly and positively affected by the perceived usefulness of the process and the perceived ease of use of the system.

In the case of our study, we are trying to put a measure on what the user feels that they are going to get out of the action of using the paid content service. We will be measuring this by looking at what benefits or rewards the user perceives that they will achieve as a result of adopting this content. These benefits may be an improvement in the way they work, more money or enhanced status/credibility.

2.3.2 Ease of Use

Another one of the determinants of the acceptance of technology, according to Davis' Technology Acceptance Model – is perceived ease of use, described as the degree to which a person believes that using a particular system will be free of effort. (Davis, 1989).

In the case of fee-based online content, this includes the process of registering and going through the necessary steps to access the content in question. For our study, this implies that the entire process of paying for content online needs to be as simple as possible in order to reduce barriers and instil a perception of ease of use in the user.

Numerous studies have been cited in where the ease of use of a system positively and directly effects the adoption of online services (Choi et al, 2009). The ease of use has also been shown to have a significant influence on the attitude of the user (Davis et al, 1989).

In the online environment, we can think of “ease of use” as being a combination of the ease of understanding the proposition, the ease of navigation and the ease with which key information about the proposition can be recognised (Rederer et al, 2000). Other studies in e-commerce have found that the ease of use affects participation. The ease with which a transaction can be carried out is both a direct and an indirect factor on electronic commerce usage; ease of usage has a direct effect on whether a user will make an online purchase (McCloskey, 2003-4).

Conceptually, we can see how the interaction between the user and the interface of the system will have an effect on the user's intention to proceed with a transaction. If the amount of effort required to understand and to proceed is deemed to be too high (i.e. the system is perceived as being too difficult to use), the user may change their intention – especially if there are other alternatives available or if the perceived usefulness of the content is not that high.

We will be discussing how the presence of suitable alternatives affects the user's intention and behaviour in a subsequent chapter, based on what we have gathered from the TRA and the TAM.

2.4 Alternatives

So what happens when there are alternatives to the fee-based content in question?

The TRA in its original form only considers a situation where a user is performing a single possible action. A study by Ajzen and Fishbein found that a user's intention to perform a particular action could be more accurately predicted if we considered all of the possible actions rather than focusing on just that one particular action. Further, in support of the original TRA, their study also found that the original constructs – attitude and normative beliefs – had a direct effect on intentions where there were two or more alternatives. The study concluded that when predicting intention (and thus behaviour) we must take into account the alternatives available to the user (Ajzen and Fishbein, 1969).

The presence of alternatives also becomes important if one is to study the continued use of a system. Research has shown that the longer a user maintains the use of a system, the lesser the perceived attractiveness of the alternatives (Johnson and Rusbult, 1989). However, this study deals with the psychology behind human relationships. It can be reasoned that this study still gives us some direction to study what role alternatives can play in areas other than human relationships – in this case the choice of a fee-based online content service versus an alternative.

2.5 Satisfaction

The perceived usefulness once the user has used a system directly influences their satisfaction of the system. This satisfaction then influences their likelihood to continue using the system (Bhattacharjee, 2001). It is important for us to dwell a little longer on the satisfaction levels of a user after they have used a service because in reality, a service can only be sustained commercially if the user continues to use it.

Once we have determined the factors influencing first-time use, it is useful to study the user's behaviour when it comes to continued use.

The Expectation Confirmation Theory (Oliver, 1980) states that *“post-usage ratings of satisfaction appear to be a function of a linear combination of an adaptation level component (expectations or prior attitude) and disconfirmation”*.

The study essentially shows that satisfaction is based on the perceived expectation before the use of the system, combined with the perceived disconfirmation of this perception i.e. whether the user felt that the system exceeded their expectation or not. If it did (positive disconfirmation), then they're said to be satisfied. Further, the study also showed that the satisfaction measure directly impacted the attitude and the intention of the user, which is more relevant to our study.

Building a bridge between the theories surrounding user satisfaction and the technology acceptance model as Wixom and Todd have done (Wixom and Todd, 2005) allows us to see the theoretical logic that links user satisfaction and technology acceptance. Their study has shown that user satisfaction (information satisfaction and system satisfaction) is a strong predictor of intention to use. Results from other studies have shown that users' intention to continue using a system is determined by their satisfaction with IS use (Bhattacharjee, 2001).

In a study examining post-adoption behaviour, Parthasarathy and Bhattacharjee used information technology adoption as a basis for their analysis, combined with other theories such as the Diffusion of Innovation theory by Everett Rogers (Parthasarathy and Bhattacharjee, 1998).

Studies have shown that over 60% of subscribers to online services discontinue their services because of dissatisfaction with the service (Keaveney, 1995 in Parthasarathy and Bhattacharjee, 1998). Post-adoption satisfaction is thus an important determinant of continued usage.

This construct plays an important role in helping us take the study a step forward and thus understand not only the factors determining the initial adoption, but also the continued use or recurring use of fee-based online content.

A further study of attitudes when faced with alternatives leads us to The Investment Model, which analyses the tendency of an individual to persist in a relationship (Rusbult et al, 1998).

Going by this model, an individual's persistence in establishing a relationship can be determined by analysing the satisfaction level of the user from that relationship, the quality of the alternatives available, and thirdly the investment size. This refers to the magnitude or importance of the resources attached to that relationship (Rusbult et al, 1998).

2.6 Building our hypotheses

Based on our detailed review of the TRA and the TAM, we are now able to pull together the various constructs reviews and focus on a few constructs which will enable to predict user behaviour when presented with a fee-based online content service.

As we have seen, Ajzen defines "intention" as "**an indication of a person's readiness to perform a given behaviour**", and considers intention to be a direct antecedent to behaviour (Ajzen, 1991).

Based on our review of theories, we are going to measure the user's "intention to use", and use this as an indicator of the user's likelihood to use the given fee-based online content service. The "intention to use" thus becomes the dependent variable for our research exercise.

The TRA has been described as a general model (Davis et al, 1989), one which does not specify the beliefs specific to a particular behaviour. For this, we need to identify the

beliefs relevant to the behaviour that we are studying – in this case the behaviour being the use of fee-based online content.

Before the user actually uses the content, we are looking at the determinants of first-time use. From the TRA and the TAM, we can see how the attitude of the user towards the system, their normative beliefs and their perceived usefulness all influence their perceived consequences.

Hypothesis HA1: The greater the value of the perceived consequences of using the fee-based content, the more likely the customer's intention to adopt it.

The other important construct that comes out as an important determinant is the ease of use of the system which has a relatively lower direct significance on the user's perceived consequences, but which significantly affects the user's perceived usefulness of the system (Davis, 1989).

Hypothesis HA2: The greater the perceived ease of use of the fee-based online content, the more likely the customer's intention to adopt it.

The third important construct in predicting first-time usage behaviour that comes out of our literature review is the subjective form or social factors, which we get from the TRA.

Hypothesis HA3: The higher a user perceives social influence in using the fee-based online content, the more likely their intention to use it.

The next construct that we can consider as a result of our findings is the availability of comparable alternatives. We have already seen how alternatives influence a user's behaviour in an earlier chapter. The evaluation of alternatives by the user is not only important to predict first-time usage, but also to predict continued usage of the system.

Hypothesis HA4: The greater the perceived value of using the fee-based online content as compared to available alternatives, the more likely the customer's intention to use it.

The last construct we consider is user-satisfaction. Again, this factor is of significance to determine continued usage as the satisfaction the user experiences after the first use of the system can influence their decision to continue using the system.

Hypothesis HA5: The higher the level of satisfaction felt by the user after using the fee-based online content, the more likely their intention to adopt it.

2.7 Entertainment vs Information Content

We have already defined a fee-based online content service.

In their research paper, Choi et al have divided online content services into two categories – entertainment and information. Their study was intended to investigate the difference among customer groups based on the type of online content (Choi et al, 2009). It is not clear from the research paper what the basis of classification of online content services was. Choi et al’s research classifies “entertainment” content services as games, movies and music, and “information” services as newspapers, magazines, academic papers and professional databases.

It would appear though that users behave in a particular way towards an online content service not because of the kind of content, but because of what motivates them to use the content service.

The same piece of content can be used by different users for different reasons. An aviation magazine can be extrinsically motivated content for a user who uses it as a resource for work and depends on it for professional success, whereas it is intrinsically motivated content for someone who is just interested in events in the aviation field.

The current study, in line with Choi et al’s study, has split online content services into two categories: entertainment and information. This has been done with a view to see if there are any differences in behaviour between those users who consume entertainment content and those who consume information content.

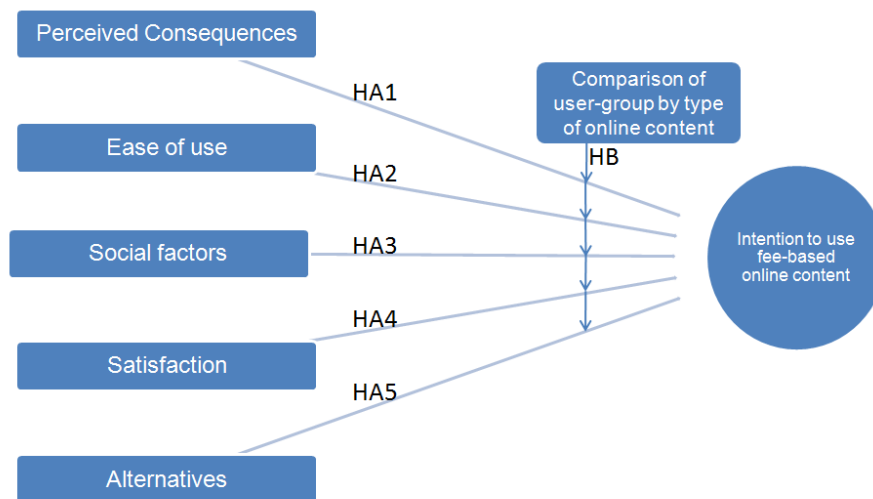
Based on this discussion, we propose the following hypothesis:

- *Hypothesis HB: A user’s behaviour towards the online content service will differ, based on the type of online content.*

2.8 Proposed Research Framework

Based on our literature review and the hypotheses that we have posited, we propose the following research framework.

Figure 2.1: Research Framework



Source: Adapted from Choi et al, 2009