The Effect of Ethical and Sustainability Issues on Consumer Adoption of Digital Technology in the Consumer Purchasing Journey

Abstract

Against a background of increasing use of digital technology in society including the retail sector, this developmental paper identifies a need for research into ethical and sustainability issues that affect an individual's decision to use digital technology as part of a purchasing journey.

Research into technology acceptance is well established using models such as the Technology Acceptance Model (Davis, 1989), however much of that research focusses upon the benefits of using technology and ease of use and does not take account of ethical issues.

Given increasing interest in ethical and sustainability issues, particularly amongst younger more socially aware generations, this could be problematic for businesses looking to benefit from the introduction of digital technology, and represents a gap in current knowledge, specifically what ethical issues affect an individual's choice to use a digital technology when purchasing a product or service, and how do those ethical issues effect that decision.

This developmental paper represents the first step in filling that gap in our knowledge.

Track: Marketing and Retail

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1.0 Purpose of the research

Digitization has evolved breathtakingly in the last two decades and is penetrating and changing all aspects of human life and society (Capurro, 2017; Royakkers *et al.,* 2018). This evolution includes digital technology that can be employed by organisations in all stages of the consumer purchasing journey, either online or offline, meaning that consumers will often encounter some form of new digital technology when making a purchase. Indeed consumers can now purchase many goods and services almost exclusively online using a variety of different digital technologies and platforms, and even where consumers chose to purchase goods or services in more traditional ways, such as in supermarkets, they often encounter various new digital technologies such as self-service checkouts and data collection technology through their use of loyalty cards. All the indications are that the employment of such digital technology in the consumer purchasing journey by organisations will only increase in the future given the cost and other advantages offered by such technology to them (The Telegraph, No Date).

Whilst many of these new digital technologies also offer benefits to consumers, such as the convenience of shopping from home, time saved queueing in supermarkets and the increased relevance of highly personalised advertising and promotional activity, they also pose a whole raft of ethical dilemmas and questions for them. For example, is it morally acceptable to consumers for organisations to replace human staff with digital self-service technology at supermarket checkouts? Or to use data relating to shopping habits collected via loyalty card usage to target promotional activity in order to increase sales and profits?

In addition to such ethical dilemmas and questions, consumers face similar concerns relating to sustainability. Is it morally acceptable to consumers for organisations to employ digital technology in the consumer purchasing journey that has an adverse impact upon the environment through, for example, the mining of ores and materials needed to manufacture that technology? Or the generation of power to run that technology?

Such ethical and sustainability issues are of concern as they are known to significantly impact consumer purchasing behaviour with a growing trend towards ethical spending resulting from better informed and more socially responsive consumers (Harrison *et al,* 2005; Sheahan, 2005; Cheng *et al.,* 2011; Sharma and Lijuan, 2013) with younger generations such as Millennials believing they have a responsibility to make the world a better place and feeling that businesses should do the same (McGlone *et al.,* 2011). Furthermore, concerns about sustainability and climate change are currently of growing concern to many individuals as reflected in activities such as the Extinction Rebellion that hit the headlines in 2019 (BBC, 2019).

However, past research into the adoption and use of new technology in any context has focussed on the benefits offered to users by the technology in question and its ease of use, with little if any research addressing the impact of either ethical or sustainability issues on an individual's decision to use a particular new technology.

This omission has been noted in relation to new digital technologies employed by organisations in the consumer purchasing journey such as blockchain, which amongst other uses, is the digital technology behind crypto currencies such as Bitcoin and has been noted to consume substantial amounts of power (McCarthy, 2019). Furthermore, Tang *et al.,* (2019) noted a 'void' of research into ethical issues associated with Blockchain and called for 'urgent' research into ethical issues surrounding the use of the technology.

This omission is also of wider concern as organisations that maintain high ethical standards have better relationships with customers (Cheng *et al.,* 2011; Sharma and Lijuan 2013) which carries implications for future trade and profitability.

This research therefore aims to address this gap in current knowledge and respond to calls for research such as that made by Tang *et al.,* (2019) by identifying and examining potential ethical and sustainability issues and dilemmas relating to the use of new digital technology that consumers may encounter when making a purchase, and by assessing the impact of those issues on their decision to use new digital technology when making purchases.

2.0 Literature Review

2.1 Ethics

For the purposes of this research, 'ethics' is defined as philosophical morality (as opposed to religious or legal morality) and what is deemed to be 'right' or 'wrong' voluntary behaviour that influences others based upon issues such as fairness, justice and widely recognised social norms such as honesty and fair play with sanctions for those that breach ethical standards being socially focussed such as disapproval or ostracism (Robertson and Anderson, 1993; Jackson *et al.,* 1997; Tavani, 2007; Cheng *et al.,* 2011; Sharma and Lijuan 2013).

There are many philosophical ethical theories which are diverse and well established, including deontological (duty-based) where standards are defined by rules, utilitarianism (consequential-based) where the goal is to minimise harm and maximise good, contract or rights-based and virtue (character-based) acts where the focus is upon the kind of person we should be and what type of character traits we should exhibit (Roman, 2007; Roman 2010; Taylor 2014). Dependent upon which theory is followed, philosophical 'ethics' can therefore be described as either rules governing conduct, the identification of goals and values worth pursuing, or the pursuit of character traits worthy of development (De George, 1995).

Parsons (2007) developed a framework for ethical consideration related to communication with the public based upon long standing ethical principles which reflects many of the arguments given above:

1. Non-Malfeasance i.e. do no harm. One should avoid doing intentional harm to others and avoid foreseeable harm
2. Beneficence i.e. to do good. One should work in the best interests of others and seek opportunities to do good
3. Veracity i.e. tell the truth. One should not lie in order to persuade someone to act in a desired manner
4. Confidentiality i.e. maintain others privacy. One should not disclose private matters
5. Fairness and social responsibility. One should treat people equitably and be socially responsible

In many ways these five principles reflect the utilitarian theory of philosophical ethics which, as noted earlier, is based upon minimising harm and maximising good. This link to the utilitarian theory of philosophical ethics is further emphasised when the issue of sustainability, i.e. the avoidance of depletion of natural resources in order to maintain an ecological balance, is taken into consideration given the nature of Elkington's (1994) Triple Bottom Line for sustainable marketing i.e.:

1. Avoiding harm to the environment
2. Avoiding the promotion of social inequality
3. Encouraging long term development

This research can therefore be seen to be grounded in the utilitarian theory of philosophical ethics.

2.1.1 Ethical Issues Related to the use of Digital Technology

Various authors have identified ethical issues specifically related to the use of digital technology that may be of concern to individuals. For example, Royakkers *et al.,* (2018) identified the following six issues of potential ethical concern:

1. Privacy
2. Autonomy
3. Safety and security
4. Balance of power
5. Human dignity
6. Justice

Other issues identified as being of potential ethical concern to individuals include fraud, access to information, intellectual property, unsolicited e-mail, trustfulness, advertising targeting children, false advertising, product warranty and fulfilment (Cheng, 2011).

Given the potential for ethical concern identified with these issues, any of them could therefore impact the decision by a consumer to use a particular digital technology when making a purchase. It is therefore proposed that their impact on that decision will be investigated by this research.

2.1.1 Factors Affecting Attitude towards Ethical Issues

Ethical standards have been shown to be subjective with individuals holding a unique perspective toward ethics, which depends significantly upon factors such as environment, culture and personal development (Sharma and Lijuan, 2013) which may explain the generational differences in attitude towards ethical behaviour such as those noted earlier in Millennials (McGlone *et al.,* 2011). Together with demographic factors such as education and gender (Roman, 2010) and issues such as being a digital native or digital immigrant, such factors could therefore also cause significant differences in ethical attitudes towards the use of digital technology amongst consumer when making a purchase. This research therefore also proposes to investigate the impact of such factors on that decision.

2.2 Technology adoption

As noted earlier, research into user acceptance of new technology has focussed upon the benefits offered by technology and its ease of use. This research has been undertaken using a variety of theories, frameworks and conceptual models such as the theory of reasoned action, the theory of planned behaviour and the unified theory of acceptance and use of technology (Yousafzai, 2012). This field has been described as 'one of the most mature research areas in the modern-day information technology (IT) literature' (Yousafzai *et al.,* 2010, p. 1172) with perhaps the most ubiquitous model used as a basis for such research being the Technology Acceptance Model (TAM) developed by Davis (1989) and shown in figure 1.0 below.

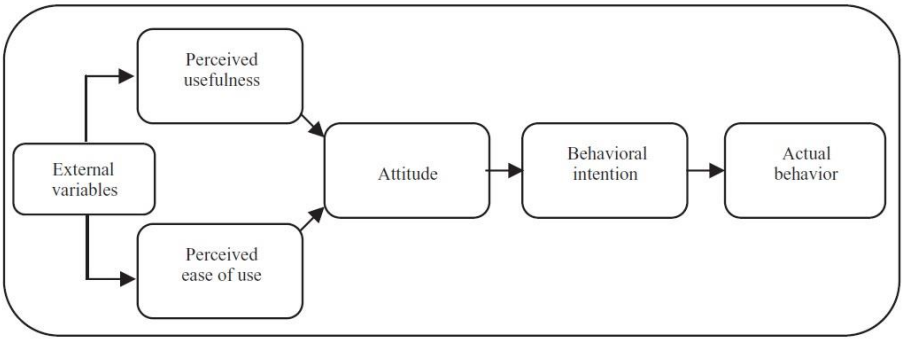

Figure 1.0 Technology Acceptance Model (Davis, 1989)

This Technology Acceptance Model (TAM) has been described as 'a powerful and parsimonious model' (Yousafzai et al., 2007) and theorises that an individual's acceptance of a technology is determined by their voluntary intention to use that technology which in turn is determined by the individual's attitude towards that technology and their perception of its usefulness.

Given this background of widespread use in assessing user acceptance of new technology in academic research, it is proposed that this research will use the TAM model as a theoretical basis.

2.3 Research Question, Aims and Objectives

This aim of the research will be to identify and examine the effect that ethical and sustainability issues have upon a consumer's decision to use digital technology when making a purchase, with the research question therefore being 'what effect do ethical and sustainability issues have upon consumers usage of digital technology when undertaking a purchase?"

The objectives are therefore:

i. To identify ethical and sustainability issues that may impact a consumer's decision to use digital technology when making a purchase
ii. To examine the effect those issues have upon a consumer's decision to use digital technology when making a purchase
iii. To understand why those issues impact a consumer's decision to use digital technology when making a purchase.
iv. To identify demographic and other factors that mediate a consumer's decision to use digital technology when making a purchase on ethical or sustainability grounds.

In order to achieve this, it is proposed to modify the TAM to account for ethical and sustainability issues that consumers may encounter when deciding whether to use new digital technology when making a purchase and to test the revised model in the context of a consumer's ethical orientation.

3.0 Methodology

3.1 Research Design

This Research will follow a mixed-method sequential exploratory design with an initial qualitative phase of research being used to inform a subsequent quantitative phase of research. This design is a common approach in the field of academic marketing research when little is known about a subject area. Qualitative methodology will be used to initially explore the subject area before subsequently verifying and validating findings using quantitative methodology (Morgan 1996; Harrison and Reilly, 2011).

3.2 Qualitative Methodology

Semi-structured qualitative interviews will be used to collect data during the initial qualitative phase of research aimed at identifying ethical issues that may affect the decision to use a particular technology. Semi-structured interviews allow research participants to share rich descriptions of phenomenon of interest with a researcher, are an established means of investigating a complex area, and an appropriate technique for exploratory studies (Mason, 2002; DiCicco-Bloom and Crabtree, 2006; Hughes, 2006; Saunders *et al.,* 2009).

As the literature review indicated that ethical values are influenced by different environmental, cultural and personal development backgrounds (Sharma and Lijuan, 2013) and generational influences (McGlone *et al.,* 2011), a wide sample of individuals representing different generations and backgrounds will be included in the research with participants selected on a purposive convenience basis. The use of such purposive samples is typical of qualitative research (Miles and Huberman, 1994). Whilst academic literature suggests sample sizes of around 12 to 15 for such research (Miles and Huberman, 1994; Madden and Perry, 2003), this research will follow the principle of saturation whereby interviews will be conducted until no further significantly different insights are emerging (Saunders *et al.,* 2009).

The qualitative data will be analysed using thematic analysis, which is a flexible means of analysing data that is independent of any particular ontological or epistemological perspective and provides a detailed and rich account of qualitative data (Coffey and Atkinson, 1996; Braun and Clarke, 2006).

3.3. Quantitative Methodology

An online questionnaire using Qualtrics software will subsequently be used to quantify and confirm the findings of the qualitative phase of research, and validate the refined TAM, as this method enables standardised, relatively structured data collection (Matthews and Ross, 2010). Given the nature of ethical values identified above, a stratified random sampling technique will be used to ensure that all sections of the wider population are included in this phase of research with the sample size being determined by the requirement for a high degree of statistical accuracy for the findings and the needs of the chosen analysis technique(s), most likely Structured Equation Modelling (Saunders *et al.,* 2009; Bryman and Bell, 2011). Appropriate care will taken to ensure reliability and validity throughout.

4.0 Anticipated Results

In addition to identifying ethical and sustainability issues that affect consumer technology usage decisions, the results of this research are expected to demonstrate generational differences in ethical influence on those decisions along with further differences based on demographic factors such as education and income levels given that ethical values are influenced by different environmental, cultural and personal development backgrounds (Sharma and Lijuan, 2013). It also anticipated that it will be possible to validate a revised TAM that accounts for these influences.

5.0 Discussion

5.1 Implications

This research will contribute to technology acceptance literature, literature that addresses ethical issues relating to the use of technology and general business management literature by introducing consideration of ethical and sustainability issues into the decision to deploy new technology for the first time.

This research will also enable managers to identify ethical and sustainability issues that may affect consumer decisions to use digital technology in the purchasing journey. This will allow managers to adjust their decision making thereby avoiding potential customer displeasure and maximising use

and acceptance of any new digital technology they introduce. This may be of particular importance when targeting specific groups of consumers with specific ethical concerns about particular digital technology.

5.2 Proposals for next research steps

The next stage of this research will be the identification of a suitable sampling methodology for the qualitative phase of research, specifically the identification of characteristics that differentiate individuals with differing ethical viewpoints and stances. This could be based upon demographic factors such as age, education, and income level as well as factors such as cultural background.

Once this has been completed, the process of identifying and recruiting potential participants for the semi-structured interviews will begin, with a view to conducting those interviews in mid to late 2020 with the aim of preparing initial results for presentation at BAM 2021.

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