Exploring the adoption of self-service checkouts and the associated social obligations of shopping practices

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ABSTRACT

While retailers and other service providers are increasingly introducing self-service checkouts into stores, these technologies do not have universal appeal for consumers. The literature offers limited understanding of how self-service checkouts influence shopping practices and consumers' experiences of the in-store environment. Using the lens of practice theory, this paper explores adoption of self-service checkouts by consumers. Semi-structured face to face interviews were used to capture consumers' discursive accounts of their shopping practices, and to examine their interactions with self-service checkouts. Findings illustrate that unwilling customers feel a sense of social obligation to use self-service checkouts at times in order to help others. This study provides a broader appreciation of how consumers engage with self-service checkout processes, and extends understanding of how consumers manage the paradoxes that surround the introduction of in-store technologies by retailers. The managerial implications of self-service checkouts for retailers are also discussed.

1. Introduction

In-store technologies have dramatically changed the ways in which retailers are able to offer their services to consumers (Bitner et al., 2002). These include evolving transformations, such as hand held scanners, and the use of smartphone, artificial intelligence and geo-fencing technology heralded by Amazon Go (Grewal et al., 2017). Other technologies such as self-service checkouts, hereafter SSCO, are commonly available in retail formats such as supermarkets and hypermarkets (Schuman, 2014). SSCO became popularised by retailers in the 1990s, with estimates that the technology will be available in 325,000 stores worldwide by 2021 representing a marked increase up from 200,000 stores in 2013 (RBR, 2016). Retailers typically consider such innovations as mechanisms to reduce the length of queues as well as employee related costs, and to free up some of the physical space required by more traditional point-of-sale (PoS) systems (Walker et al., 2002; Mann, 2013). Conversely, others have preferred not to introduce self-service checkouts in their stores, or have subsequently withdrawn them, owing to fears that such technologies encourage the increased likelihood and normalisation of consumer theft (Taylor, 2016). As such, an understanding how, if at all, in-store technologies, such as SSCO, influence consumers' shopper practices and the overall shopping experience is critical for the success, or otherwise, of retailers. Such

provides the impetus for the current research.

A substantial body of literature reports investigations into consumers' reactions towards self-service retailing, particularly the historical development of self-service stores and the supermarket format (see, Alexander et al., 2008, 2009; Bailey et al., 2010). Research has identified the particular groups of consumers that are most likely to adopt SSCO relative to others (e.g. Lee et al., 2010). Attention has primarily been focussed on understanding consumer behaviour prior to the use of SSCO (Poulter, 2014). Yet despite these contributions, research on consumers' use and experiences of retail innovations in-store, including SSCO, remains limited, and, arguably, requires further investigation. While research has explored consumers' reactions and coping strategies more generally in relation to technological products (see, for example, Mick and Fournier, 1998) such studies tend to focus on technologies that have been acquired by choice rather than those that have been introduced into the shopping experience by retailers and/or services providers without the consumer themselves actively choosing them as part of their in-store consumption practices.

Using the lens of practice theory, this paper explores the adoption of SSCO by consumers, and how such in-store technologies are actually experienced by shoppers. We draw on interview data designed to capture consumers' discursive accounts of their shopping practices. Adopting an iterative approach, whereby our analysis resonates

between data and literature (see, Goulding, 2005), the findings reveal and unravel how consumers' interactions with SSCO are implicated within their shopping practices, and their in-store experiences, and considers consumers' coping strategies as conceptualised by Mick and Fournier's (1998) in their 'paradoxes of technology' framework.

This study underscores that unwilling customers find that although they are not required to use self-service checkouts at times they feel a sense of social obligation to use them in order to help others. Here, social obligation can be understood in terms of normative practices of etiquette whereas the individual will sacrifice personal preferences for the benefit of others (Hirschman, 1987). For example, some consumers clearly feel that shoppers with large loads and with small children should have first priority at full service checkouts, and on occasions other shoppers are obligated to use their less preferred option, the self-service checkout. The findings and subsequent discussion provide a broader appreciation of how consumers actually engage with the self-service checkout process, contributing to current debates focussing on contemporary retail change and shopping practices (e.g. Clarke et al., 2006; Jackson et al., 2006; Davies and Fitchett, 2015; Elms et al., 2016). This paper also contributes to the extant in-store technology and innovation literature and extends understanding of how consumers manage the inherent paradoxes that surround the use of new in-store technologies.

We begin with a review and synthesis of the relevant research that focuses on retail innovations, in-store technologies, and the implications for consumers' shopping practices, as well as their reactions towards new technologies and coping strategies. Following a discussion of our methodology, we report on the findings generated by our in-depth interview data. We conclude by discussing the central findings of the study and opportunities for further research, and then outline the resulting managerial implications of self-service checkouts for retailers.

2. Literature review

2.1. Retail innovations, in-store technologies and consumers' shopping practices

Innovation involves change, whether this is incremental or more discontinuous, and the introduction of a new or different means (an idea, object, device, or method) to better serve existing ends or those in the future (Walker and Johnson, 2006). Given the increasingly competitive nature of the retail landscape in many developed and developing economies, innovation is generally understood as not just a necessity for commercial success and profitability in the sector but is also critical for survival and long-term sustainability.

In retail research, innovation has been the focus of recent investigations, for example, on technological atmospherics, such as music and olfactive marketing, bricks and clicks business models, gamification and the online retail experience, and smartphone based technologies (Grewal et al., 2017). Such research has sought to understand how technologies influence overall organisational performance and customer loyalty. Nevertheless, studies explicitly focussing on consumers' experiences of such technologies, such as explored in this paper, have received relatively scant attention in the extant literature, as discussed below.

Research specifically on SSCO has isolated the particular traits and characteristics that influence consumers' intentions to use these technologies. For example, studies have suggested that men are more likely to be willing to use self-service checkouts as they often exhibit lower levels of technological anxiety relative to women (Lee et al., 2010). Similarly, younger shoppers have been found to be more willing to use self-service checkouts compared to older consumers (Collier and Kimes, 2013). Lee et al. (2010) also suggests that income also moderates a consumer's intention and willingness to use self-checkouts, with shoppers falling into higher income brackets tending to portray lower levels of technology anxiety and, as a result, exhibit higher intentions to use

SSCO. Moreover, Oyedele and Simpson (2007) assert that shoppers who exhibit high levels of self-efficacy, and thus higher levels of confidence in their own abilities to complete a particular task, are more likely select SSCO compared to others (Lee and Lee, 2017).

In-store factors have also been reported as influencing intentions to use SSCO. In particular, perceived waiting times in-store have also been found to have a strong and positive influence on consumers' intentions to use SSCO relative to more traditional PoS systems (Dabholkar and Bagozzi, 2002). Similarly, social anxiety, as a result of perceived crowding, also has been demonstrated to have a significant and positive influence on the likelihood of a shopper selecting a self-service checkout (see Elms et al., 2016). Studies also suggest that shoppers who display a preference for using self-service technologies do so as it offers them an alternative interpersonal service option to avoid interactions with a store's employees – and potentially other shoppers (Meuter et al., 2000; Tsou and Hsu, 2017), and, crucially, improves the efficiency of the shopping journey and time in-store (Hsieh, 2005) by enabling shoppers to avoid waiting in queues. Dabholkar et al. (2003) emphasises that shoppers can be more inclined to use self-service technologies if an employee illustrates how the automated option operates, particularly in situations when shoppers perceive the technology is overly complicated to use (if they are new users of the technology, the retailer introduces a new interface, or one which is dissimilar to those used by other retailers). Furthermore, Reinders et al. (2008) also suggest that shoppers' perceptions of self-service technologies are enhanced when a manned PoS is offered by a retailer as a back-up option (Leng and Wee, 2017).

Conversely, research has also emphasised that self-service checkout systems can potentially decrease consumers' satisfaction with the in-store experience (Dabholkar et al., 2003; Lee and Lee, 2017). Indeed, it has been reported that some consumers have mooted their frustrations when forced to use self-service checkouts owing to the reduced availability of staffed PoS systems, leading to a proportion (estimated at around one in three) abandoning a shopping trip altogether (Poulter, 2014). The most common and significant reason reported why some consumers dislike self-service checkouts is a result of their negative attitudes towards technology failure, where they will avoid such technologies as they are perceived to not work as they are intended (Meuter et al., 2000), owing to their reputation for frequent mechanical failure (Reinders et al., 2008).

Although self-service checkouts were not initially received well by shoppers, they have, however, grown in popularity (Zapan et al., 2017). Nonetheless, SSCO still remain not universally adopted by all shoppers (or are in some cases actively avoided), nor do they have a homogeneous appeal (Koronowski, 2010). The inference is that self-service checkouts have become integrated within some consumers' shopping practices more than others. Accordingly, there remains a need to understand the adoption of self-service checkouts by consumers, and their experiences thereof, which lends itself to a consideration of the socially-embedded and situated nature of consumers' actual shopping practices, as discussed below.

2.2. Theories of practice and in-store shopping

Emerging since the 1970s, theories of practice have established themselves as a common theoretical currency across the social sciences and humanities (Schatzki et al., 2001). Theories of practice are identified with a diverse and heterogeneous collection of proponents, including, amongst others, Pierre Bourdieu, Judith Butler, Anthony Giddens, and Michel de Certeau, whereas no unified or authoritative version exists (Reckwitz, 2002). Nevertheless, theories of practice offer a useful lexicon to integrate and mobilise the social world. The so-called 'practice turn' (Schatzki et al., 2001) in social theory at the turn of the twenty-first century included a reconsideration and reappraisal of the act and process of consumption (see, for example, Warde, 2005). Such reflects a marked shift in social scientific research from an overt pre-