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Editorial

Retail digitalization: Implications for physical stores

1. Introduction: digitalization and physical stores

Digitalization is dramatically transforming society, and distinctly so within the field of retailing. Following the emergence of the Internet and new technology, new patterns and logics have emerged, and scholars have paid increasing attention to what is described as a digital transformation of retailing. However, until recently the focus has primarily been on e-commerce (Hagberg et al., 2016). E-commerce is certainly growing and increasingly encompassing both large and small retailers, and the growth of e-commerce platforms such as Alibaba and Amazon is strongly influencing the competitive environment. Still, while e-commerce is a central aspect of digitalization, the implications of digitalization extend far beyond e-commerce (e.g. Pauwels et al., 2011). To take an example, mobile applications are used by consumers not only for e-commerce but also in fixed store settings in order to compare prices, evaluate products, and compare health, environmental, and ethical considerations, in addition to facilitating payment or creating shopping lists, among other things (e.g. Ström et al., 2014; Groß, 2015; Pantano and Priporas, 2016). Emerging technologies such as the Internet of Things, augmented reality and artificial intelligence are also starting to be applied in the field of retailing (Grewal et al., 2017). Big data also offers a lot of possibilities, and Grewal et al. (2017: 1) note that those retailers who are able to draw conclusions from big data are better prepared and can better predict consumer behaviour, thereby targeting consumers more effectively.

New technology is developing fast and retailing is increasingly considered to be in rapid transformation. We are already witnessing not only new shopping behaviours, but also new retailing behaviours. The implications of digitalization for physical stores are of key importance, since the majority of retail sales still take place in physical stores. E-commerce was estimated to have a share of 8.7% of total global retail sales in 2016, which was expected to increase to 14.6% in 2020 (Statista, 2017). Of the remaining 92.3% and 85.4% respectively, the absolute majority of sales (except for some itinerant trade) is still, and will continue to be, conducted in physical stores. While there are examples of physical stores in crisis and decline (Corkery, 2017; Peterson, 2017) as a consequence of increased competition from e-commerce suppliers and an emerging digital retail logic, there are also examples of new retail formats and adjustments in retailing concepts that strengthen the role of the physical store (Hagberg and Fuentes, in press; Hagberg and Jonsson, 2016; Hultman et al., 2017). Moreover, these physical stores both impact and are impacted by digitalization in retailing. Many online retailers are establishing new physical store concepts as a complement to their online business, and physical stores are often considered a key component in the omni-channel concept that is becoming increasingly common in the retailing landscape (e.g. Brynjolfsson et al., 2013; Verhoef et al., 2015; Blom et al., this issue; Hure et al., this issue). Digital devices also increasingly populate the physical stores and are provided by retailers (Soutjis et al., this issue) or brought in by consumers (Fuentes et al., this issue) and increasingly connected to each other (Pantano and Timmermans, 2014; Balaji and Roy, 2017). Thus, rather than separating retail digitalization, understood as e-commerce, and the physical store, understood as traditional commerce, we are now witnessing initiatives for the integration of the digital and the physical logic of retailing (Hagberg and Jonsson, 2016). Recent examples of this trend include the cooperation between Apple and IKEA regarding augmented reality applications (Maggio, 2017), and the Amazon takeover of Whole Foods Market (Business Wire, 2017). It is this interaction and integration of the digital and physical that needs more scholarly focus, as we must evaluate the existing models and frameworks, as well as (re)search for new ways in which to understand retailing in an emerging and digitalized society (see also Grewal et al., 2017).

While it is clear *that* digitalization will have implications for physical stores, it is less clear *how*. To date, there has been limited research addressing this question–a gap this Special Issue attempts to redress. We, the editors of this Special Issue, have participated in a two-year project on retail digitalization, with special consideration of how digitalization affects business models for retailers with physical stores.[1] In the project, we identified implications for the physical stores that warrant further attention and that must be understood from multiple perspectives, epistemological views and research traditions. The digital transformation and its rapid development calls for joint efforts to understand this emerging phenomenon. In consequence, we decided to initiate a scholarly discussion about these issues via, first, a special session at the EIRASS conference in Edinburgh 11–14 July 2016 and, second, an open call for papers to the Special Issue on *Retail Digitalization: Implications for Physical Stores*. The *aim* of this Special Issue is to identify and analyze emerging trends and transformations that digitalization brings to the retail industry, with special emphasis on the physical store setting. This is central for fostering an understanding of how retail companies and employees can benefit from digitalization

[1] Catrin Lammgård and Malin Sundström were also part of the project, "Digitalization and changing business models in retail trade", at the Centre for Retailing, University of Gothenburg, and financed by The Swedish Retail and Wholesale Council. The project was conducted in the form of case studies of Swedish retailing companies, based mainly on interviews with managers in different functions of these companies. The companies studied included IKEA, ICA, Nudie Jeans, Hemtex, Media Markt, Mat.se, Gekås and Byggmax (see e.g. Hagberg and Jonsson, 2016).

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opportunities and ultimately create conditions for sustainable growth and profitability.

As this Special Issue calls for the development of an understanding of retail digitalization and the implications for the physical store, it is important to define how we interpret and understand "implication". In the following section, we introduce three understandings of the notion of implication in the context of digitalization and physical stores, give examples of findings from our project of such implications, and describe how the individual contributions to this Special Issue focus on different aspects of these implications. In the subsequent section, we provide a brief summary of the papers in this Special Issue, both in order to introduce the papers and to illustrate how they complement each other in relation to the topics discussed and methods used. Finally, we conclude with a discussion of the contribution of this Special Issue and outline ideas for further research.

2. What does "implication" imply?

"Implication" is a common word in research papers and there are often requests from journals to include it in headlines such as "research implications", "managerial implications", "practical implications", etc. However, what does the notion of "implication" actually imply? On the basis of the papers included in this Special Issue, we can distinguish at least three nuances of the term implication, each with a different emphasis, which also have significance for how we understand retail digitalization and its implications for physical stores. The three nuances are:

- Implication as *effect*
- Implication as *integration*
- Implication as *value*

Implication as *effect* refers to how something is affected by something else in terms of consequences and results. In the case of retail digitalization, this for example refers to how the physical stores are affected by the growth of online shopping. Implication as *integration* places an emphasis on actual involvement. In the case of retail digitalization, this refers to the interweaving and entanglement of digitalization in the physical stores, and in particular when addressing processes of entangling and interweaving the digital and the physical. Implication as *value* refers to how the significance, meaning and roles may change. In the case of retail digitalization, the physical stores may change, and the meaning of the store as such may change and take on a different role in an increasingly digitalized retail landscape.

In the following subsections, we elaborate on each of the three nuances and understandings of implication in the context of digitalization and physical stores. We use these understandings of implications as a framework for discussing how the six papers included in this Special Issue together contribute to our knowledge and understanding of retail digitalization and the implications for physical stores. It is also our ambition that this framework will guide the discussion on implications for future research in more general terms.

2.1. Implication as effect

Implication as effect refers, in this context, to how physical stores may be affected by digitalization. From the individual papers and our research project, we identify at least five main implications of digitalization for physical stores. These areas of impact are: i) store sales, ii) transparency, iii) purchase processes, iv) store settings and formats, and v) store employees or co-workers.

The first important aspect of the effects of digitalization on physical stores is how sales in the physical stores are impacted by the growth of online sales and shopping. It was pointed out early on that such "cannibalization" may occur via the transfer of sales from physical stores to online (Alba et al., 1997; Doherty and Ellis-Chadwick, 2010; Hernant and Rosengren, this issue). With the above-mentioned frequent media reports of decline and large-scale closures of physical stores, we may have reached the point at which such cannibalization is a reality for many retailers. Although such potential effects were pointed out early on in the literature in relation to the growth of e-commerce, there has been a paucity of empirical studies that investigate such effects. Hernant and Rosengren (this issue) contribute to these issues by investigating how adding online sales impacts the sales of the physical stores, and to what extent this leads to a cannibalization of sales in the physical stores when sales are transferred from one channel to the other.

Another aspect that may impact sales in physical stores is the reduction in prices arising from increased price transparency (Brynjolfsson and Smith, 2000; Hernant and Rosengren, this issue). However, in our research project, we were also able to observe other emerging forms of transparency, in addition to price transparency, that affect physical stores and staff. In addition to price comparisons, other types of information in relation to, for example, other product characteristics, working conditions in the supply chain (Egels-Zandén and Hansson, 2016), and advice from other consumers (Fuentes et al., this issue) are becoming increasingly available to consumers. While early examples of transparency primarily concerned information prior to a store visit (e.g. comparing prices before deciding whether to buy online or offline, or which store to purchase from), the smartphone increasingly allows this kind of information to be available in the physical store, which also affects both the purchase process and the staff (see below).

Although personal computers have long been used in relation to purchase processes that include the physical stores, it was through the increased presence of smartphones that digitalization started to have a significant impact on the purchase process in physical stores. Digital technologies are part of the exchange process before, during and after the purchase (Grewal et al., 2013) and may be involved in various aspects of the exchange, such as communication, transaction and distribution (Peterson et al., 1997; Hagberg et al., 2016). The physical stores are becoming part of an increasingly digitalized retailing landscape that, in the terminology of Fuentes et al. (this issue), can be described as new *informationscapes, socialscapes* and *experiencescapes* in which the physical stores themselves are reconfigured. The physical store can be considered one (or several) of many touch points in this increasingly digitalized retail landscape.

The use of digital technologies in the purchasing process also affects the store settings (Pantano and Viassone, 2015), as well as inspiring the emergence of different retail formats that combine digital and physical aspects (e.g. Colla and Lapoule, 2012; Hagberg and Fuentes, in press). Inside the stores, such changes include the presence of digital technologies such as motion sensing equipment (Mathmann et al., this issue), electronic shelf labels (Soutjis et al., this issue) or different forms of self-service technologies (Fuentes et al., this issue). In addition, the digital and the physical are increasingly being combined in the new retail formats of physical stores that are emerging in the increasingly digitalized retailing landscape.

A fifth example of the effect of digitalization on the physical stores concerns the employees who work in these stores. Fuentes et al. (this issue) emphasize that the use of the smartphone in shopping may engender the avoidance of interaction with store staff, the removal or modification of activities previously occurring in the store, as well as the fact that activities previously performed before the store visit are now increasingly