

# The Impact of Smartphones on Modern Day Shopping Habits

Student No: 110024253

## 1 Introduction

*“Smartphones have revolutionised the shopping experience, allowing us to browse on the move and purchase items with the single click of a button”* [1]. This statement, made by former EE chief-executive Olaf Swantee and backed by this report, describes a radical behavioural shift in personal shopping habits that has arisen out of a dramatic narrowing of the gap between the intrinsic nature of humans to buy on impulse, and the capabilities of technologies that enable us to do so like never before.

Today online shopping has become a global enterprise, with over £114bn worth of UK online sales made in 2015 alone [2]. The rise in penetration of mobile-commerce has also become hard to ignore. At the start of 2015, the UK association for online retailers IMRG (Interactive Media in Retail Group), reported that 40% of all UK online retail sales made in the previous year were conducted on a mobile device, with 25% of these sales completed using a smartphone, and 75% of the sales made using a tablet device [3]. Exactly a year later, these figures had risen to show over half of all online sales for 2015 were accountable to mobile shopping, with smartphone purchases in particular showing a sharp rise in the year-on-year sales figures (95.6% growth in January sales alone between 2014 and 2015) [2].

In this brief report, an exploration is taken into identifying the reasons for why smartphones have now become so intertwined with consumer shopping habits, focussing in particular on what major benefits this technology presents for both consumers and retailers, alongside the social, legal, professional and ethical implications that emerge on the back of growing demand and popularity within the mobile-commerce sector.

## 2 Utilisation of Smartphones in Retail

### 2.1 Mobile Web vs. Mobile App

As growing numbers of consumers begin to use their smartphones as a primary tool for browsing and shopping online, retailers are adopting different ways of making themselves noticeable and accessible to these new kinds of customer. At the top-level, these approaches are split into two key technologies: *mobile websites* and *mobile applications (apps)*.

#### 2.1.1 Mobile Websites

In a 2015 survey investigating the UK digital retail landscape, the Internet Advertising Bureau UK (IAB) found that 94% the UK's top 50 retailers were providing a mobile-friendly experience for their online customers [4].

Out of these 47 companies, 51% elected to provide a *mobile-optimised* website, dedicated exclusively to those visitors browsing via a smartphone or tablet; whilst 49% employed *responsive web design* to enable their existing desktop-based website to dynamically cater to smaller screens as and when required [4].

Regardless of how a retailer chooses to implement their mobile site, the incentives for enhancing the experience of mobile customers are today proving highly significant. In addition to obtaining a cut of the estimated £6.6bn worth of sales per year currently lost to a lack of mobile investment by the UK retail industry [5], pages that are "*legible and usable on mobile devices*" [6] can now also benefit from boosted SEO rankings, owing to a recent update rolled out by Google to promote higher-quality websites across their mobile search results [6].

### 2.1.2 Mobile Applications

The prominence of mobile applications as a channel for retail has become undeniable over recent years. In 2015, Criteo reported how apps thoroughly outperformed mobile websites both in terms of customer loyalty and overall spending, with users on average browsing more than double the number of products viewed on mobile websites, and spending over 10% more with each transaction [7].

A common motivation for retailers to develop a mobile application, stems from the ability to utilise additional device capabilities that can help to differentiate one retailer's mobile offering from that of competitors. Existing retailer apps provide a whole host of enhanced features, ranging from localised store finders powered by device GPS, through to real-time delivery push notifications, and even customised in-store customer engagement schemes using cyber-physical interaction platforms such as Apple iBeacon [8].

Mobile apps also offer unrivalled marketing opportunities, enabling retailers to engage one-to-one with individual customers through targeted special offers alongside other forms of advertising tailored to their own unique interests and shopping habits [9].

## 2.2 Checkout & Payment

Owing to the increasing prevalence of wireless payment technologies and 'eWallet' services like Apple Pay and Android Pay, mobile payments now stands as one of the fastest areas of growth across the entire mobile commerce sector [10], increasing its penetration by 39% between 2009 and 2014 according to the latest global payments report by Worldpay [11].

In the UK, 37% of all transactions conducted in 2014 were completed without a debit or credit card, with an "*exceptionally high*" 23% of payments attributed directly to online payment services including Paypal and Google Wallet [11].

Whilst mobile payments remains a fairly new concept to many consumers, retailers have been employing smartphones for years to help drive customer loyalty schemes and optimise the 'checkout' process. Global coffee chain Starbucks is often cited as one of the major success stories in adopting mobile technology into their retail model, becoming one of the first companies to offer the ability for customers to complete the entire checkout process using nothing but their smartphone and the Starbucks mobile app [12].

As smartphones become evermore integrated into retail payments, many more companies are expected to follow suit in offering customers a way to purchase goods and collect loyalty rewards as part of a 'seamless' and near-instant checkout process [10].

## 2.3 Connectivity

Naturally, the success of mobile commerce depends entirely on the ability of users to connect to retailer services over a cellular or WiFi connection. Latest research has shown how network speeds can have a direct influence on the shopping habits of mobile consumers, with Ofcom reporting a 20% increase in shopping activity across users with access to a 4G connection, compared to those limited to 3G connections or worse [13].

These findings support the strategy employed by many retailers to provide free in-store WiFi for customers, in the hope of driving further online and traditional sales, alongside opening new opportunities for direct 'one-to-one' marketing [14, 15]. Likewise, consumers also appear to appreciate the ability to check prices online whilst in-store, with a 2015 YouGov survey finding that a third of UK consumers would wish for all retailers to offer free WiFi as standard [16].

Many of the larger retailers have begun taking this idea one step further, by issuing in-store staff with tablet devices to assist customers through answering queries, checking stock levels and helping to complete in-store purchases [17].

## 2.4 Social Media

Whilst the power of social media in the context of retail is now well understood, smartphones offer a unique dynamic in that they are almost always on our person.

With Facebook, Twitter, Instagram and Pinterest all seeing the majority of traffic originate from mobile devices [18], retailers not only benefit from increased consumer reach from advertisements displayed within social media apps, but for the first time, are now also able to communicate with their customers in *real-time*, owing in part to mobile-specific features like push notifications and direct messaging [19].

# 3 Legal, Social, Ethical & Professional Implications

In this section, discussion turns to the legal, social, ethical and professional implications that are attributable to the use of smartphones and mobile technology within the retail industry.

## 3.1 Legal

Under the Data Protection Act (1998) [20], it is the obligation of the retailer to ensure customer data is adequately protected from the risk of theft, loss or unauthorised manipulation, regardless of whether these acts are deliberate or accidental [20]. In addition, providers must ensure that they comply with all of the legal rights awarded to individual users, including the request to view any and all personal information held by that provider, and to raise objections pertaining the use of personal data under particular circumstances [20].

In the case where a retailer employs a cloud-based solution, special considerations have to be made to ensure continued operation within the bounds of the Data Protection Act [21]. The geographic location of customer data is one such consideration, with the Data Protection Act stipulating that personal data "*shall not be transferred to any country or territory outside the European Economic Area (EEA) unless that country or territory ensures an adequate level of protection for the rights and freedoms of data subjects in relation to the processing of personal data.*" [20]. As many cloud providers operate data centres across multiple countries, it becomes the obligation of the client to ensure that customer data is only ever stored in locations where it has been deemed under EU authority that adequate data protection legislation is in place [21]. The EU-US Privacy Shield [22] is one example of such an agreement, which allows US-based companies to

store EU citizen data on account of demonstrating full-compliance with EU data protection laws.

Under Section 1 of the Computer Misuse Act (CMA) [23], retailers who provide a mobile application must only access material previously authorised by the device owner. Compliance with this law is often ensured through the stipulation of terms of conditions that a user must accept before access to the application is granted. Whilst some applications may require a dedicated set of terms and conditions specific to the particular nature of the given application, many rely on the in-built permission systems provided by vendors such as the Apple iOS App Store and Google Play store.

Whilst often difficult to bring to prosecution, copyright laws continue to apply to smartphones in cases where retailers and/or individuals attempt to share, distribute or claim to be their own, creative material including literacy, artwork, music and film for which they do not hold the rights to do so [24].

### **3.2 Social**

The introduction of smartphones into the retail market has provided many benefits to both consumers and retailers, supporting greater convenience, faster transactions, deeper analytics and opening up a more 'personal' relationship between businesses and their customers.

What is perhaps most striking about the impact of mobile-commerce, is the power that it has placed back into the hands of the individual consumer. Modern-day shoppers have become savvy shoppers, no longer prepared to accept a price at face value and instead turning to their smartphones to compare prices online.

Whilst often resulting in lower prices for consumers, 'show-rooming' has demonstrated the potential to have profound, and often devastating effects on the state of high street stores [25]. As more people continue to spend their money online, retailers face an increasing risk of having to close stores, costing people their jobs and damaging local economies.

### **3.3 Ethical**

Although by definition unique to each individual, the ethical considerations of mobile-commerce are, for the most part, formalised within related legal structures and professional standards. Whilst not a legally or professionally enforceable document, the Ten Commandments of Computer Ethics published by the Computer Ethics Institute [26], represents a set of guidelines aimed at defining what would commonly be classed as ethical behaviour within the IT industry.

Many - if not all - of these describe 'general' good practice that continue to apply to retailers and smartphone owners, including: showing respect to other people's digital privacy; refraining from stealing the intellectual property of others; and paying due consideration to the impact of computer systems on others [26]. This last point holds particular importance in the case of the retail industry for reasons discussed in relation to the social implications.

### **3.4 Professional**

Under their remit to protect the integrity and standing of the computing and IT profession, the BCS provides a professional code of conduct [27] that all members operating within the IT and software sectors are expected to adhere to. For any retailers who wish to operate within online and mobile commerce, many of these rules are also applicable, and should ideally be complied with regardless of any or no membership to the BCS.

Of notable importance are the standards relating to “*Public Interest*” [27]; including rules regarding the protection of public privacy, security and wellbeing alongside the due consideration for the environment; and “*Duty to Relevant Authority*” [27]; stipulating the need for individuals to conduct themselves and their work within the bounds of applicable law, and take rightful responsibility when unfavourable situations arise.

## **4 Conclusion**

This report supports the notion that smartphones have made a significant contribution to the revolution of modern-day shopping habits, taking into account confirmatory statistics from across a range of industries, and finds that mobile-commerce is only expected to grow evermore prominent as new technologies and consumer markets emerge over time.

However, whilst the current and potential future benefits appear to far outweigh the drawbacks, society must remain vigilant to the very real and serious dangers that further digitisation of our high streets pose to our economies and the lives of those working within the retail industry.

## References

- [1] O. Swantee, "Infographic: online shopping goes mobile." (Accessed: 10/05/2016), The Telegraph, Dec. 2014. [Online]. Available: <http://www.telegraph.co.uk/sponsored/technology/4g-mobile/connected-retail/11299797/infographic-4g-mobile-internet-retail.html>
- [2] "Over half of online sales now made through mobile devices." (Accessed: 05/05/2016), Interactive Media in Retail Group, Feb. 2016. [Online]. Available: <http://www.imrg.org/index.php?catalog=2658>
- [3] "Mobile accounts for 40% of all online retail sales." (Accessed: 10/05/2016), Interactive Media in Retail Group, Feb. 2015. [Online]. Available: <http://www.imrg.org/index.php?catalog=1769>
- [4] "94% of the top 50 UK advertisers have a mobile optimised site." (Accessed: 20/05/2016), Internet Advertising Bureau UK, Nov. 2015. [Online]. Available: <http://www.iabuk.net/about/press/archive/94-of-the-top-50-uk-advertisers-have-a-mobile-optimised-site>
- [5] C. Ratcliff, "50+ fascinating stats about mobile commerce in the UK: 2015," (Accessed: 20/05/2016), Econsultancy, Jun. 2015. [Online]. Available: <https://econsultancy.com/blog/66543-50-fascinating-stats-about-mobile-commerce-in-the-uk-2015/>
- [6] "Google Webmaster Central Blog: Rolling out the mobile-friendly update." (Accessed: 21/05/2016), Google Inc., Apr. 2015. [Online]. Available: <https://webmasters.googleblog.com/2015/04/rolling-out-mobile-friendly-update.html>
- [7] "State of Mobile Commerce - Q4 2015," (Accessed: 19/05/2016), Criteo, Feb. 2016. [Online]. Available: <http://www.criteo.com/resources/mobile-commerce-report/>
- [8] "What is iBeacon? A Guide to iBeacons." (Accessed: 24/05/2016), iBeacon Insider, 2014. [Online]. Available: <http://www.ibeacon.com/what-is-ibeacon-a-guide-to-beacons/>
- [9] D. Kosir, "Mobile Apps Vs. Mobile Web: What Retailers Need To Know," (Accessed: 24/05/2016), Clearbridge Mobile, 2015. [Online]. Available: <http://clearbridgemoible.com/mobile-apps-vs-mobile-web-what-retailers-need-to-know/>
- [10] P. Lee and C. Calugar-Pop, "Mobile Consumer 2015: The UK cut - Game of Phones," (Accessed: 15/05/2016), Deloitte LLP, Dec. 2016.
- [11] "Global Payments Report - 2015," (Accessed: 19/05/2016), Worldpay, Dec. 2015. [Online]. Available: <http://www.worldpay.com/global/insight/articles/2015-12/global-payment-report>
- [12] B. Roemmele, "Why Is The Starbucks Mobile Payments App So Successful?" (Accessed: 20/05/2016), Forbes, Jun. 2014. [Online]. Available: <http://www.forbes.com/sites/quora/2014/06/13/why-is-the-starbucks-mobile-payments-app-so-successful>
- [13] "The UK is now a smartphone society." (Accessed: 20/05/2016), Ofcom, Aug. 2015. [Online]. Available: <http://media.ofcom.org.uk/news/2015/cmr-uk-2015/>
- [14] G. Cove, "Comment: Retailers, free Wi-Fi and where it may lead," (Accessed: 22/05/2016), Essential Retail, Apr. 2016. [Online]. Available: <http://www.essentialretail.com/news/article/570f55ef5c84c-comment-retailers-free-wi-fi-and-where-it-may-lead>
- [15] G. Charlton, "More reasons for retailers to offer wi-fi in stores." (Accessed: 20/05/2016), Econsultancy, Mar. 2013. [Online]. Available: <https://econsultancy.com/blog/62353-more-reasons-for-retailers-to-offer-wi-fi-in-stores/>

- [16] A. Farmer, "Consumers want free Wi-Fi in-store to improve shopping experience." (Accessed: 19/05/2016), YouGov UK, May 2015. [Online]. Available: <https://yougov.co.uk/news/2015/05/22/consumers-want-free-wi-fi-store-improve-shopping-e/>
- [17] R. Thompson, "John Lewis to step up store-based omnichannel projects." (Accessed: 20/05/2016), Retail Week, Nov. 2014. [Online]. Available: <http://www.retail-week.com/5066429.fullarticle>
- [18] N. McCarthy, "Most Social Networks Are Now Mobile First." (Accessed: 24/05/2016), Statista, Apr. 2014. [Online]. Available: <https://www.statista.com/chart/2109/time-spent-on-social-networks-by-platform/>
- [19] C. Ratcliff, "The challenges of real-time marketing in social." (Accessed: 20/05/2016), Econsultancy, Mar. 2014. [Online]. Available: <https://econsultancy.com/blog/64560-the-challenges-of-real-time-marketing-in-social/>
- [20] *Data Protection Act 1998*. Parliament of the United Kingdom, Jul. 1998.
- [21] "Guidance on the use of cloud computing." (Accessed: 24/05/2016), Information Commissioner's Office, UK Government, Oct. 2012. [Online]. Available: [https://ico.org.uk/media/for-organisations/documents/1540/cloud\\_computing\\_guidance\\_for\\_organisations.pdf](https://ico.org.uk/media/for-organisations/documents/1540/cloud_computing_guidance_for_organisations.pdf)
- [22] E. L., "The new transatlantic data 'Privacy Shield'," (Accessed: 24/05/2016), The Economist, Feb. 2016. [Online]. Available: <http://www.economist.com/blogs/economist-explains/2016/02/economist-explains-2>
- [23] *Computer Misuse Act 1990*. Parliament of the United Kingdom, Jun. 1990.
- [24] *Copyright, Designs and Patents Act 1988*. Parliament of the United Kingdom, Nov. 1988.
- [25] A. Campbell, "The peril of 'showrooming'." (Accessed: 23/05/2016), BBC News, Apr. 2013. [Online]. Available: <http://www.bbc.co.uk/news/magazine-22098575>
- [26] R. C. Barquin, "In pursuit of a 'ten commandments' for computer ethics," *Computer Ethics Institute*, 1992.
- [27] "BCS Code of Conduct," (Accessed: 24/05/2016), BCS The Chartered Institute for IT, Jun. 2015. [Online]. Available: <http://www.bcs.org/category/6030>