THE ROLE OF INTERNET OF THINGS IN MOBILE SHOPPING AND RETAILING

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Abstract: The traditional shopping era has changed with the emergence of technology and has brought to both retailers and consumers a unique way to invisibly interact with one another, this has also given the retail industry a gigantic transformation. The growing significance to technology is becoming a challenge for retailers to continue being engaged with their customers. With introduction of smart phones, tablets, Ipad's etc. retailers have been coming up with new ways to engage with their customer thorough technology. Mobile shopping (M-shopping) has recently been becoming a big hit lately and extremely beneficial in both retailing and marketing. Alongside, with the Internet of things (IOT) this unique form of shopping makes it easier for consumers as retailers have the benefit of reaching out to millions with losing much profit. IOT allows consumers to not only buy and make transactions online but to get reviews, quality ratings, trace and track with just one click and easy internet access.

Track: Retailing and Omni-Channel Management

Introduction:

Recent research shows that 90% of mobile shoppers use their smart phones for several different actions such as, finding store location and directions, store hours, price comparisons, finding promotions and the list could go on and on (Faulds, Mangold, Raju, & Valsalan, 2018). The ease of access is coming to the benefit of retailers. Smart phones have become a necessity in our lives and part of our daily routines throughout all age groups, with such phenomenal growth retailers have taken the advantage to benefit from it. Alongside, third generation applications (3G) mobile communication technologies have generated the mobile commerce growth (Gao, Waechter, & Bai, 2015). With Smart Phones being a necessity in our lifestyle "consumers no longer go shopping, they always are shopping" (Faulds et al., 2018). Shopping or making transactions through mobile devices has been gradually growing to an extent that it has drawn much attention in both industry and academia (Wang, Malthouse, & Krishnamurthi, 2015) . The introduction of smartphones has revolutionized shopping. As stated by Chuck Martin, "in the mobile era you no longer go shopping, you are always shopping". From mobile apps, to geo-fenced targeted offers, to continuous access to the online environment, the advances of in this monarchy have led to the non-stop change of consumer expectations and to retailers greater ability to connect with consumer (Grewal, Roggeveen, & Nordfält, 2017). Technology has also created efficiency in reaching out to a majority of consumers with such low cost. This brings in a huge difference in the comparison of traditional marketing. Furthermore, mobile marketing has had a remarkable influence in the retail environment due to the fact that most of the applications the consumers use include notification about products and services to the consumer once the shopper if close to the store or during the online shopping journey (Shankar, 2016).

Internet of things:

"The words "Internet" and "Things" mean an inter-connected world-wide network based on sensory, communication, networking, and information processing technologies, which might be the new version of information and communications technology (ICT)" (Atzori, Iera, & Morabito, 2010). The major concept of IOT is that it reassures all electronic devices to connect to the internet with one another. The term IOT was first discovered in 1999 by Kevin Ashton, he referred to it as "uniquely identifiable interoperable connected objects with radio-frequency identification (RFID) technology (Li, Da Xu, & Zhao, 2015). However, the actual definition of IOT is still under process (Tang, Huang, & Wang, 2018). With mobile apps increasing nowadays the IOT is moving the mobile expansion upwards. Mobile apps have a significant effect on the industry by providing comfort, actual and influential ways to sustain connected devices (Ostashchenko, 2018). Figure 1 illustrates the evolution of IOT.

Not only is the IOT a technology that is growing in a very fast way but there is also an expectancy to revolutionize the world by having a change in everything we do and how we do it.

Another thing the IOT is connected with is product service providers, although the relation between e-retailers and products service providers is complicated due to online transactions it is extremely important as the consumer evaluates this part (Jie, Subramanian, Ning, & Edwards, 2015). With the era of IOT more capabilities are included with product service providers which include (tracking and tracing), with the sensors that are now available (Jie et al., 2015). To my understanding this right here brings the consumer his own way of tracking the shipment or order through the available mobile app as to there is no need to call customer service or the company to ask. Also another statement many researchers had come to a conclusion saying was when all devices are connected together then new markets can be the outcome, productivity can well be improved, the reduction of operating costs and also many other benefits can be gained afterwards.
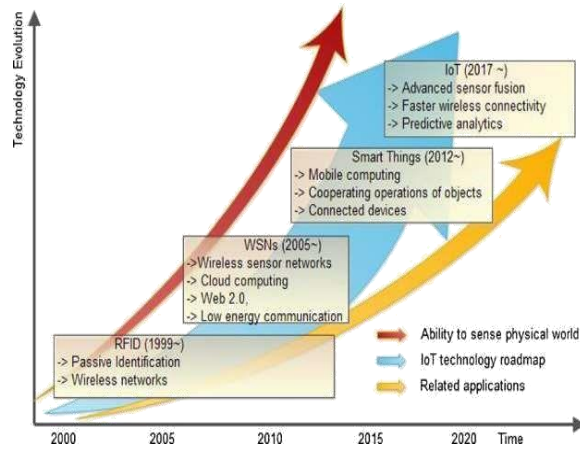
Fig.1: Evolution of the IoT

<u>Consumer engagement with retailers:</u>

The concept of consumer engagement (CE) was made up to master in several ways that customer behaviours may have an effect on the firms beyond transactions (Jaakkola & Alexander, 2014).
With the emergence of the internet and smartphone and most importantly mobile shopping the engagement of consumers with retailers has changed (Fuentes & Svingstedt, 2017) in way that customers now have the access to do their whole purchase journey through a click. With the cheap and easy access of internet now shopping can get done from your comfortable sofa at home, this gives no need for consumers to visit the actual physical store and have a showrooming. Back during the traditional retail settings, employees were mostly known as experts in both the products and services being sold (Shankar, 2016). Furthermore they help out the customer with their (Shankar, 2016) decision making process (e.g. putting together a .matching clothing outfit for a special event or occasion) (Shankar, 2016). Now with such available technologies it's all up to the customer with no physical retail interaction and this is bringing feeling of threat, uselessness and possible redundancy with such new technology (Shankar, 2016).
There are now apps that even help consumers while they are inside the store itself this leads them into providing a self-service for themselves without interacting with the employees. For example, IKEA Canada has created an in-store "buddy app" to help customers into creating their shopping lists and finding the right aisle of the required product al through their smartphones. Afterwards the app was updated into allowing the customer to scan the item wanted in order to see if there were different colors, sizes and stock information (Iyadurai & Subramanian). This is only one of the mobile revolutions as their a few more out there with the same idea, ex. Amazon go.
Research data collection shows that within this mobile era and interconnectivity retailers can get ahold with their consumers anytime, from anywhere to individualize the shopping journey for both the parties across all the stages of the purchase process (Faulds et al., 2018) Retailers are also engaging with their customers invisibly through many different Omni channel. Location-based apps allow customers to receive appropriate and useful information when they are close to the local store or even directions to a nearby outlet (Grewal, Bart, Spann, &

Zubcsek, 2016). With such apps retailers are driving in customers into their stores with low costs and when the customer is nearby which makes the visit easy.

Studies prove that with the emergence to Omni channel marketing within the retail industry it has changed the way retailers engage, respond and interconnect with their customers. (Faulds et al., 2018)

What omnichanel marketing does is that it provides "the ability to deliver a seamless shopping experience to customers across all channels by synchronizing technologies, services, and processes in a centralized. Interoperable way" (Faulds et al., 2018)

Proposed Research Questions:

1. *Will the internet of things increase consumer engagement with retailers, service providers and brands or if it will reduce consumer engagement as machines take over all the "talking" to other machines. (machine to machine commerce) – main question*

1. How mobile shopping is affecting the consumer engagement with retailers, service providers? (increasing or reducing)
2. What are factors that create resistance towards mobile technologies from the consumer's perspective, and how can firms develop strategies to overcome this resistance?

3. How does mobile change the shopping journey (pre, during, post) from the consumer's perspective?
4. How technology is changing the Retail Industry? And how it's driving consumers?
5. How can retailers benefit from evolving technology and changing shopping behaviour?
6. How the IOT has a major effect of the consumers shopping journey/activities?
7. How has interconnectedness influence a consumer journey is setting with beacons and promotions via smart phones based on the consumer behaviour?

Proposed Methodology:

Due to the nature of this research, this study ~~employ~~employs a quantitative approach. We have a plan to use structural equation modeling and partial least square to analysis the data. In order to get a better understanding of the consumer engagement with retailers in a country where it has not yet been explored I will collect data on this case in Kuwait. The data for this study will be collected using the quantitative method as it will help me reach out to a large number of people. A well-developed survey will be passed around to both students and staff at universities based in Kuwait, this will help me in collecting information from different demographics (age, gender, status, occupation). I believe that a cross-sectional survey design will be the best way to collect data to test the research question and followed along by the hypothesis which was built upon findings from literature reviews.

Conclusion:

In conclusion, with the emergence and high demand on mobile shopping in this era this paper aims to discover the engagement of consumers with retailers in the future with the use to internet as well as the role of front-line employees. My main aim during this research is to discover whether the Internet of things (IOT) will increase consumer's engagement with retailers, service providers, and brands or if it will reduce consumer engagement, as machines take over all the "talking" to other machines. Moreover, this paper briefly described how some major retailers are switching over to the IOT and how it makes life easier for the consumer himself which included, comfort, usefulness and ease of use. The theoretical implication of this research is to look at the future of retailing in emerging markets.

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