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Segmenting the UK Mobile Fashion Consumer

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SEGMENTING THE UK MOBILE FASHION CONSUMER

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Abstract

As mobile apparel retail websites and apps grow in popularity, insight into the psychology and behaviours of shoppers using these mobile interfaces has become more important. Although Android operated mobile devices dominate the market, the current study of fashion consumers' opinions shows that, in terms of fashion shopping via mobile devices, Apple's iOS is leading. The data show that mostly females aged 18 to 34 years old purchase clothing via smart phones, and consumers using iOS smart phones purchase more clothing via mobile than Android OS. Over 60% of respondents prefer to use websites on their mobile devices despite the wide range of mobile apps available. 70% of respondents think that 'website and products do not display properly on the small screen'. This is the first study focusing on critical issues of fashion m-retail's environment based on mobile fashion consumers' behaviour and shopping experience. Five mobile fashion consumer types - self-confident addicted shoppers, time-conscious consumers, followers, bargain hunters and style-conscious connected browsers - were identified. Appropriate marketing strategies can be developed, guided by the specific mobile fashion consumer type's shopping journey, and apparel retailers can better define their target consumers and more effectively tailor mobile interfaces to meet customer needs.

Keywords: m-retail, mobile device, mobile fashion consumer, mobile marketing, consumer behaviour, mobile apps, smart phones, fashion retail, apparel, consumer segmentation, comparative analysis.

1 Introduction

Despite the rapid growth of mobile retail businesses, there is a lack of published material that has examined shopping behaviour on fashion mobile websites and apps. The current study attempts to fill this gap in research on apparel consumption by analysing the extent to which marketing communications affect shoppers' intention to purchase in the mobile retail environment. The project focuses on fashion consumers' experience, mobile devices, technological advances and usability issues. The evaluation employs the knowledge from different disciplines, and helps to understand why fashion consumers prefer to use websites on their mobile devices, but not apps. This research project aims to help specialists involved in the development and management of m-retail web sites to build successful mobile retail environments. By understanding the motivations and behaviours of mobile shoppers, apparel retail companies, mobile marketing specialists, and website and app developers can better define their target consumers and more effectively tailor their offerings to meet customer needs. The research will contribute to developing a theory of the interactive relationship between mobile apparel retail and its consumers.

2 Literature review

According to Curran and Keith (2013) mobile technology is present in every aspect of our lives, and retailers need to understand the role of mobile devices in business models and to take actions required to maximise the customer benefits. The era of mobile computing has catalysed the largest shifts in consumer behaviour over the last forty years, whereby Apple and Google seem to have driven mobile adoption rates. According to Magrath and McCormick (2013) users appear to be substituting websites for mobile applications, which could soon become a retailer's most important sales channel, justifying the requirement for immediate analysis of the consumer's perceptions. It is often suggested that e-business is just about technological change, but there are greater difficulties in implementing the intellectual, cultural and structural shifts necessary to succeed in a much more interactive mobile business environment (Harris and Dennis, 2008).

M-commerce makes online shopping more accessible, and it is becoming increasingly popular, driven by a continuing rise of smartphone ownership. Mobile consumers seem to be more confident in using their mobile phones in the shopping journey (Verdict, 2012b). Retailers, digital marketers and website developers have to understand these new types of consumer and how best to reach them. According to Shim and Lee (2011), it is crucial to identify new technological advances that enable an improvement of product presentation, and overall usability can be implemented within a design of fashion m-commerce websites and apps, and how it could encourage consumer satisfaction and engagement.

The report by eMarketer (2012) found that the share of smartphone users by operating system (OS) is seeing a trend of change. In 2012 Android experienced a rapid growth of market share and reached 43% in the US, with iOS growing slightly and reaching 33%, and BlackBerry losing its position of market leader with only 13%. The current trend suggests that by 2014 there will be two OS leaders in the mobile market: Android OS and iOS.

As with the trend seen in e-retail, as consumers gradually develop greater confidence in a technology, they are more likely to use it for making purchases. Some retailers develop more efficient and enjoyable sites and applications, for tablets in particular, more consumers will be drawn to the mobile channel (Verdict, 2011). Yet according to a June 2012 report from trade publication Multichannel Merchant (www.multichannelmerchant.com), only 29.5% of U.S. retailers have an m-commerce website. Therefore, smartphone owners are forced to face some usability issues when they want to buy using their mobile devices (Pasqua and Elkin, 2013).

Theoretically, the transactional elements of e-commerce websites will function in the browsers of the most up-to-date smartphones and tablets, but retailers need to consider how easily and quickly their

consumers may be able to finish a transaction. Therefore, retailers before optimizing their m-commerce channel need to understand what smartphone users are actually doing on their mobile devices as well as what they would like to be doing in the future (Pasqua and Elkin, 2013). 'The omnichannel shopper makes a slew of decisions on the path to purchase; for the unprepared retailer, many of these decisions could lead to losing the sale' (GTNexus, 2013).

Mobile channel offers opportunities that other channels cannot, such as being able to shop and access information from practically any location and at any time. Therefore, much online spending is likely to transfer from devices with fixed broadband connections to those that have mobile internet (Verdict, 2011). As multichannel becomes the standard for retailers, mobile sites and apps must be viewed as complementary to store shopping. The potential for integrating m-commerce into physical stores is a vital consideration, as smartphones and tablets become more powerful. QR codes have often been used by retailers to give more information on products, and to distribute vouchers for discounts, however new technology will allow this to be taken further (Verdict, 2012a).

Balasubramanian et al. (2005) conducted research focused on understanding how consumers select a specific channel and migrate from one channel to another, but these studies were focused mainly on traditional retail stores and the Internet. Another study conducted in China has examined the relationship between demographic and motivation variables with m-commerce usage activities (Chong, 2013). However, this study focused on various m-commerce usage activities, such as content delivery, transactions, location-based services, and entertainment activities, there is a limited research into consumer behaviour in m-retail in a specific commercial context, fashion retailing.

So far, however, there has been little discussion about fashion segmentation. The aim of this study is to find criteria for mobile fashion consumer segmentation. There are different strategies known for consumer segmentation, but it is important to focus on the consumer and view everything from her/his point of view, but not from the supplier's point of view (Klas et al., 2013). Hanlon (2013) argues that a Segmentation, Targeting, and Positioning (STP) model, that is relatively new, could be used for customer segmentation, as previously marketing approaches were based more around products rather than customers. According to Hanlon, STP is relevant to digital marketing, and application of marketing personas could develop more relevant digital communications. This could be achieved by the use of alternative tactical customer segmentation approaches. Many retailers use information about fashion segments in the UK from Fashion Segments by Experian (2014), which classifies all adults into 20 female and 15 male types, based upon her or his attitudes and behaviour towards shopping. Although, these segments are widely used by many apparel companies, the information is only updated once every four years. The literature confirms that segmentation strategies may be planned or intuitive (Lee et al., 2007). With increased globalization and advances in information technology, successful marketers are adapting and evolving their strategies to compete in a rapidly changing marketplace (Ko et al., 2007), especially in such a specific commercial context noted for its dynamism and complexity, as fashion retailing (Lee et al., 2007). Therefore, a review of all ways of consumer segmentation is needed to develop a theoretical framework for future consumer studies. Many authors have used different ways of segmenting consumers; the chosen way depends upon the purpose of the study and the market environment. According to Hanlon (2013), there are many ways to segment existing markets, and this can be done based on nearly any variable, as long as it is effective. The following ways of segmentation are well known and were suggested by Hanlon (2013) as the main strategies: demographics, psychographics, lifestyle, belief and values, life stages, geography, behaviour, and benefit. Traditionally it has been carried out using demographic or geographic variables, but lately psychological, psychographic and behavioural segmentation variables have been employed to develop both products and services (McDonald et al., 2004). Although, the use of these ways may have a long history, in this dynamic fashion sector, there is a need to look for new approaches due to the latest technological developments including smart phones. Besides, previously mentioned ways, there is a need to mention such variables as purchase orientation (Youngjin et al., 2013; Chanaka et al., 2007), personal values (De Juan-Vigaray and Sarabia-Sanchez, 2012), and fashion lifestyle (Ko et al., 2007) as the basis for segmentation.

3 Research Method and Design

3.1 Survey development and design

This study focuses on all fashion shopping activities, any transactional, or browsing activities, akin to the work by Chong “which are initiated and/or completed by using mobile access to computer-mediated networks with the help of mobile devices” (Chong, 2013). It was considered that quantitative measures would usefully establish a general knowledge about the situation of apparel m-retail in the UK. The design of the questionnaires was guided by the main research questions of the project, and was supplemented by items from the Verdict report on m-commerce in the UK (2011) and (2012a). At the time when the research was conducted there were no reports related to m-retail in the apparel industry, and the only information available covered the proportion of m-commerce by sector and a general overview of activities by respondents using mobile devices.

This research is designed to collect data that describe the characteristics of mobile fashion consumers. The survey instrument was chosen because it is a system for collecting information from or about people (Fink, 2013) to describe, compare, or explain their knowledge, attitudes, and behaviour. Therefore, a survey strategy, that allows quantitative and qualitative data to be collected on many types of research questions (Sekaran and Bougie, 2013), was developed in the form of a questionnaire. This mixed approach has given a broader understanding about fashion consumers’ preferences. The questionnaire comprised of closed and open-ended questions. Eight items on the questionnaire measured the extent to which participants agree or disagree with a statement, and four items were open questions where participants had to give their own answers.

3.2 Characteristics of the sample

In order to achieve the aims of the project: to learn about the trends within mobile fashion retail from consumers’ perspectives, to identify factors influencing consumers’ behaviour and to segment mobile fashion consumers based on their behaviours’, this research study employs quantitative method, which is the most appropriate to quickly identify changes over time. In August 2013, a survey was carried out in which 200 adults aged 18 and over were questioned about their buying habits and preferences towards the use of mobile devices for fashion shopping.

In order to gather primary data about mobile consumers in the UK, a pilot study survey was employed. The sample was not limited by any socio-demographic characteristics in order to test reports from published resources. The sample had one major selection criteria: that respondents should own and use a mobile device for purchasing or browsing for apparel products. The respondents from urban areas in the UK were contacted in person in the cities of Manchester, London and Birmingham. The field work was carried out over a period of approx. four weeks and the respondents were contacted during working days of the week.

The primary survey was developed to study mobile fashion consumers who purchase apparel products using their mobile devices. At this stage a pilot study of all genders, age groups and operating systems was conducted. This survey was pilot tested before proceeding to gather the data, therefore ten respondents were asked to fill in a questionnaire. At this stage, a few changes were identified and the questionnaire was amended. Overall, the total number of respondents who took part in the primary survey was 102.

The results from primary survey suggested that only two operating systems for mobile devices are the most popular among fashion consumers, and that the majority of them are females aged from 18 to 34 years old. The findings from this survey suggested a number of hypotheses. Therefore, a follow up questionnaire was developed to test additional factors which contained all the questions from the primary questionnaire and had several new questions. These additional questions covered the following areas:

- Why do the majority of fashion consumers use iOS mobile devices?

- Is that mobile device a company's property or privately owned?
- What other ways of shopping do consumers use after seeing something on their mobile device?
- Do participants find all mobile apps of their favourite fashion retailers available to download for their smart phone?

As mentioned previously, this is a phase 1 of a longitudinal project, as there is a need to test trends in consumer behaviour over time. Therefore, a modified questionnaire was developed for a follow up survey to be used for data collection a year later. The data was gathered from a sample of UK urban consumers, females aged 18 to 34 years old, using iOS or Android OS smart phones for fashion shopping or browsing. During the follow up survey the data was gathered from 98 respondents, but only 92 respondents answered all questions of the survey and satisfied the selection criteria. Respondents who did not use iOS or Android OS smart phones, but used different OS mobile devices were excluded from analysis. Criteria for selecting the subjects were as follow:

- Individuals would own a mobile device;
- Participants would use their mobile devices for any fashion shopping related activities;
- Participants are from urban areas in the UK.

After pilot testing the primary survey was amended, and the final survey included participants who do not purchase via mobile devices, but only browse for apparel products on their mobile device. A random sample of participants with smart phones, who use mobile devices for fashion shopping, or browsing, was recruited from urban areas in the UK.

The follow up survey was conducted in order to test new hypotheses that emerged from the primary survey. All of the participants were females aged 18 to 34 years old using iOS or Android OS smart phones. More participants were recruited for this follow up survey in order to test for saturation.

4 Findings

4.1 Analysis of the data from the primary survey

The research examines differences between the buying habits via mobile devices of men and women across a fashion market in the UK. Through the pilot survey, the research demonstrates gender-specific consumer behaviour differences from the attitude towards buying via mobile, to the frequency of buying and OS they use for shopping with mobile devices. This pilot survey also provides an insight on a general overview of mobile fashion retail environment. The follow up survey is further examined in terms of OS, gender, age, with attention given to willingness to purchase or only to browse via mobile devices. The data help to develop knowledge of the role of multi-channel environments within these mobile fashion consumers' shopping journeys.

Strong evidence of the differences in shopping behaviour by gender and age were found from frequency distributions. It is apparent from the data that very few males (21%) from the primary survey use mobile devices for fashion shopping and browsing. The number of male respondents is considerably lower than female due to male respondents not purchasing apparel products on-line at all, let alone purchasing clothing on their mobile devices. What is interesting in the data is that purchasing and browsing of apparel products via mobile devices is most popular among respondents from two age groups. Of the study population, over 33% of participants are 18 to 24 years old, and 41% are 25 to 34 years old.

The data suggest that iOS was the most popular OS in 2013 with over 66% using mobile devices operating with iOS for fashion shopping. Android is in second position with around 23%. The other mobile devices with different OSs (including Windows Phone OS and BlackBerry OS) all together account for around 11% of all respondents. Further analysis showed that the OS element governs a number of other processes involved in the shopping journey of apparel consumers.

Hypothesis 1.1: Consumer attitudes toward the mobile apparel shopping channel will differ according to the user's OS.

Hypothesis 1.2: Consumers using iOS mobile devices are provided with the iPhone by employer.

Hypothesis 1.3: Consumers using iOS mobile devices seem to be loyal Apple's customers.

There appears to be a significant difference in shopping behaviour between the group of participants who purchase via mobile devices, and the consumers who browse only. There are several observations that emerge from the data comparison:

- Respondents who purchase clothing via mobile devices use more mobile apps (around 46%), compared to those respondents who use mobile devices to browse. Moreover, respondents who browse for apparel products via mobile prefer to use websites.
- The majority of respondents who do not purchase clothing via mobile, but research only, agree that they do not like the idea of making payments via mobile devices. Meanwhile, the respondents who purchase via mobile, accounting for over 45%, do not have any issues with making payments via mobile.
- The majority of those who browse via mobile for clothing agree that websites do not load quickly enough. Moreover, approximately 30% of those who only browse via mobile, stated that they use Android OS mobile devices.

The most striking result to emerge from the data is that there is a difference in attitudes and behaviour between mobile fashion consumers by OS. Moreover, it is apparent from the comparative analysis by OS that the majority of fashion consumers using iOS mobile devices purchase via mobile, whereby, the majority of consumers using Android OS mobile devices do not purchase clothing via mobile, but browse only.

A comparison of the results reveals that there is a link between OS of the mobile device and consumers' willingness to purchase apparel products via mobile. A further analysis of this relationship is needed, and it is discussed in the next section with a particular focus on females aged 18 to 34 years old who use iOS and Android OS smart phones.

Contrary to the findings of past studies (Magrath and McCormick, 2013), the most striking result to emerge from analysis of the data is that over half of all respondents prefer to use websites for fashion shopping on mobile devices. There is a need to investigate whether all retailers have mobile apps available for consumers to download on their mobile devices.

Hypothesis 2: Mobile fashion consumers prefer to use websites over mobile apps due to the lack of apparel retailers' mobile apps. H.2 was addressed in a follow up survey.

4.2 Analysis of the data gathered from the sample of females aged 18 to 34 years old, who use smart phones for fashion shopping or browsing

For the purpose of this analysis, the data were gathered from only females aged 18 to 34 years old, who use iOS or Android OS smart phones for purchasing or browsing of apparel products. The sample consists of 2 segments: the extracted data from the primary survey of the female sample and the data from a follow up survey.

There were five strands of comparative studies carried out in order to look for differences or similarities in responses among females of the selected age groups. The data gathered during the primary and the follow up surveys were analysed in terms of the following variables:

- By OS of mobile devices (iOS vs. Android OS);
- By the willingness to purchase via mobile, this is by YES/NO groups of respondents;
- By age groups (18-24 years old vs. 25-34 years old);
- By frequency - only YES respondents;
- By employment status: working participants vs. students.

The majority of those who responded use iOS mobile devices accounting for around 80%. The findings from this question during the primary survey suggested the testing of H.1.2.

In order to test H 1.3, the question about a previous experience of other OS was added to the follow up survey. Further analysis showed that almost two-thirds of the participants (63%) said that they have experienced a different OS before using iOS mobile devices.

The most striking results emerge from comparison of the data by age and by employment status. Over 80% of females aged 25-34 years old have never changed OS. When looking at the question about OS used, it is significant that over 70% of females aged 25-34 use iOS. Thus, we may suggest that the majority of 25-34 year old females use iPhones for a long period of time and have never changed to any other operating system. These respondents are loyal to their chosen OS.

There is a significant difference between perceptions of students and working respondents. Around 60% of working respondents said they always use the same brand mobile device, whereby almost 80% of students have experienced a different OS before using the current one.

In response to the Question: 'Do you shop via your mobile device?' most of those using iOS mobile devices (63%) indicated that they purchase clothing via mobile. Whereby, over half of Android OS users have never made a purchase of apparel products on their mobiles. There were no significant differences in comparison of the data by age. The single most striking observation to emerge from the data comparison was that working participants are more likely to purchase clothing via mobile than students. 75% of working participants indicated that they purchase apparel products via their mobile devices. Moreover, around 30% of working respondents are frequent mobile fashion shoppers, and purchased clothing 10 or more times via mobile device within last 12 months.

An overview of the preferred interface for mobile fashion shopping suggests that the majority of respondents choose to use websites, accounting for around 60% of those surveyed. A small number of respondents prefer to use mobile apps for fashion shopping, accounting for only around 30% of consumers who purchase via mobile, but almost half of them use websites. Comparison of the data by shopping frequency was conducted by analysing the data from participants who purchase via mobile only. The sample represents mobile fashion consumers using their mobile devices to purchase clothing. The difference identified suggests that consumers prefer websites to mobile apps. There is a need to review fashion retailers' mobile apps in order to identify the main factors influencing mobile fashion consumers to use a website but not the app.

Consumers using iOS mobile devices research by looking at clothing on a mobile device before buying in-store. This suggests that these consumers are multichannel consumers using different shopping routes in order to achieve their shopping goal. The comparison of the data by the willingness to purchase via mobile suggests that NO respondents use mobile mostly for research and might purchase clothing via other means. This could be in-store or on-line via PC or laptop.

The results from the data analysis by shopping frequency found that frequent shoppers (over 54%) would research in-store before buying via mobile. Why would these consumers go to their mobile to make a purchase? Is their size not available in-store? Do they get a discount if they purchase via mobile? What drives these consumers to behave this way? There is a need to analyse mobile fashion consumers' shopping journey in order to better understand their behaviour in m-retail.

There is a significant difference between the responses of iOS and Android OS users with respect to making payments via mobile devices.

Hypothesis 3: Consumers perceive the idea of making payment via mobile differently depending on the OS of the mobile device they use.

More respondents using Android OS mobile devices agreed, accounting for around 42%, that they do not like the idea of making payment via mobile. By contrast, iOS users (56%) are more positive towards making payments via mobile.

Hypothesis 4: Consumers using iPhones will perceive the idea of making payments on their smart phones positively due to trust in iOS.

Consumers who only browse on their mobile devices perceive the idea of making payments negatively, accounting for over half of browsing respondents. Whereby, almost 50% of consumers who purchase via mobile perceive the idea of making payment positively. It is important to understand what drives consumers to think this way, and why their opinions are so different. The comparison of the data by age, by employment status found that respondents aged 25 to 34 years old, and working participants perceive the idea of making payments via mobile positively, compared to respondents aged 18 to 24 years old and students, who agreed that they do not like this idea.

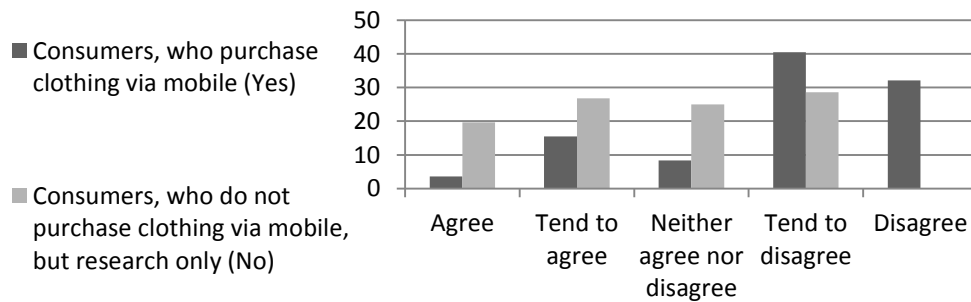


Figure 1. *Payments are too hard to make on mobile device. Comparison by Yes and No groups of respondents, %.*

A significant difference was found between iOS and Android OS users in terms of usability of mobile devices for fashion shopping. The majority of Android OS users agree that the usability of smart phones is poor. Students perceive usability as poor compared to working respondents who tend to disagree with this.

Hypothesis 5.1: Lack of apparel retailers’ mobile apps leads to dissatisfaction with usability.

Hypothesis 5.2: Poor usability leads to dissatisfaction and low purchasing.

The findings from the analysis showed that the majority of respondents tend to agree that websites or their product do not display properly on small screens.

Loading speed is another big issue for consumers. Around 40% of frequent mobile shoppers tend to agree that websites do not load quickly enough. All five stages of the data comparison suggest that loading speed is one of the major problems on mobile fashion consumers’ shopping journey.

Hypothesis 6.1: Slow loading speed of mobile websites, apps or products’ pages on smart phones reduces consumers’ intention to complete a transaction via mobile devices.

Hypothesis 6.2: Slow Wi-Fi in public places has impact on loading speed, and leads to dissatisfaction and concerns about security during shopping via smart phones.

Further analysis of the data showed that iOS users’ shopping experience is overall more positive than the experience of Android OS users. What makes iOS more suitable for mobile fashion shopping than the Android OS? The majority of consumers who only browse via mobile agree that payments are too hard to make on mobile device. Could this factor influence their willingness to purchase via mobile? Would these consumers purchase in the future if this issue could be addressed? It is important to note that over 24% of frequent shoppers and over 22% of non-frequent think that payments are too hard to make on mobile device. The comparison of the data by age suggests that over a quarter of consumers aged 25 to 34 years old and more than 31% of younger consumers tend to agree that payments are too hard to make on a mobile device. Similar results were found from comparing students with working participants. Therefore, the idea to compare smaller groups with more specific characteristics will be conducted in order to identify if there are any differences between working participants, students not working, and students working along with their studies.

In order to test H.2, the following question was added to the follow up survey: ‘Are all your favourite fashion retailers’ mobile apps available for your mobile device to download?’ The question arose to assess whether mobile apps are providing a greater shopping experience than websites for fashion shopping via mobile. Although, it was found that the majority of participants prefer to use websites to mobile apps. There is a need to know if all the required mobile apps for fashion shopping are available to consumers to download. The results found that only 40% of respondents using iOS and Android OS mobile devices find all needed apps. Moreover, around 55% of iOS and over 30% of Android OS users said that only some are available as mobile apps. A significant number of respondents, accounting for over 25% of Android OS users, did not find the mobile apps they wanted. A similar situation is seen from the comparison of the data by purchasing and browsing only. The results showed that around half of all mobile fashion consumers prefer to use website due to unavailability of mobile apps for their mobile devices. Would consumers perceive shopping experience positively if they could have all mobile apps available?

Hypothesis 7: Mobile fashion consumers will perceive shopping experience via mobile positively and this will lead to higher purchases with the use of mobile apps.

5 Mobile fashion consumer segmentation in the UK

As significant differences were found between consumers’ behaviour and attitudes, there was a need to investigate these differences in more detail. Mobile fashion consumers seem to be active multi-channel consumers using their smart phones during any part of their shopping journey. Therefore, there is a need to identify possible consumer groups for future analysis, and to compare the results with already existing fashion segments. This study identified the role of mobile devices in apparel m-retail, and will highlight the main factors influencing consumers’ shopping journey. Each of these groups was given a short coded name for ease of communication. This comparative study will help to test whether consumers’ purchase behaviour could be used as a base for consumer segmentation or are there some other factors that are more important.

For the purpose of this analysis, clusters were identified based on purchasing orientation, with particular emphasis on shopping frequency. Finally, cluster techniques were used to group together individuals with similar responses. Results of segmentation suggested the presence of five groups with different preferences: self-confident addicted consumers, time-conscious consumers, followers, bargain hunters, and style-conscious connected browsers.

Self-confident addicted consumers. These consumers purchase more than any other group, and they are frequent fashion shoppers using their mobile devices in a number of ways. Most importantly, they make purchases via mobile too. Besides, the fact that this group is the only group using mostly iOS mobile devices, they are also loyal consumers, accounting for around 33% that have never experienced a different OS. Although, they prefer websites for shopping, the majority of them (60%) found all mobile apps they needed. These consumers are satisfied with the usability, but more than half of them think that products do not display properly, and they are not concerned about the loading speed. They buy a lot via different channels, they may purchase fashion products they have seen on a smart phone in-store (63%), on their laptop (56%), and a third of them said they will buy clothing via a smart phone, and they research in-store before buying via mobile (37%). This group seems to be the only group researching and buying clothing via mobile (56%). They are confident to make payments on mobile, accounting for over 56%, and the majority of them think that payments are easy to make via mobile. The most important factors for using mobile devices for fashion shopping are as follow by the importance: the availability of the product, the ability to shop from any location and any time, the product is easy to find. They are confident in their shopping choices, and over 40% said that opinions of others are not important at all. The majority of them are working part-time, thus they may have more spare time for any way of fashion shopping compared to other groups.

Time-conscious consumers. The most surprising finding is that these consumers are not loyal to OS, and all of them have experienced a different OS mobile devices before using the current one. Although, this group prefers mobile apps for fashion shopping, accounting for 50% of all respondents, but 80% of them said that only some mobile apps are available for their mobile devices. This could be linked to the fact that 30% of them use Android OS smart phones. 50% of time-conscious consumers are dissatisfied with the usability of their devices for browsing and shopping, whereby 40% said the products do not display properly, but they did not have any issues with the loading speed. These consumers purchase less, but they seem to be an important segment in terms of their channel choices, around 40% of them will purchase clothing in-store, on laptop, and via smart phone. All of these consumers research clothing on their mobile before buying in-store, and they research in-store before buying via mobile. Although, the majority of consumers from this group like the idea of making payments, 40% of them think the payments are hard to make on mobile. For 90% of them the main factor for using mobile for shopping is the ability to shop from any location and at any time. The majority of them are working full-time, thus could be using mobile and other channels because of the lack of free time for fashion shopping.

Followers. These consumers prefer websites and mobile optimized websites, and it is not surprising that over 70% of followers do not find all needed mobile apps available. These consumers are not keen to use any different routes to buy fashion products they have seen on smart phone, only a third of them will buy on their laptop. Over 60% of these consumers research clothing on mobile devices before buying in-store. They are confident to make payments via mobile and think it is easy. In terms of main factors for shopping via mobile this group is the same with the self-confident addicted consumers' group. Followers' group seems to be very self-conscious, because 50% of them said that opinions of others are of importance.

Bargain hunters. These consumers are neither active shoppers, nor interested in apparel products consumers. These consumers may have the least importance for retailers because they have the lowest scores of other routes for fashion shopping. They may use mobile to research clothing, but it is not clear what they will do next. 25% of them said that none of their favourite retailers have mobile apps. Therefore they prefer websites for shopping (47%). They value the opinions of others (53%) more than any other of the groups identified, but it is not important at all for 40% of them. The most significant results suggest that these consumers are satisfied with the usability, but they are the least happy with the display on a screen. They are split in their opinions about payments. The most important factors for using mobile devices for fashion shopping are as follow in order of importance: the product is easy to find, the ability to shop from any location and at any time, and getting a discount when purchasing online. The majority of them are working full-time.

Style-conscious connected browsers. They use mostly websites (around 80%) for browsing of fashion products via smart phones. Moreover, around 54% of them said that only some retailers have mobile apps. Although, these consumers do not purchase clothing via mobile devices, they are active multi-channel fashion consumers, and mobile devices play an important role in their shopping journey. As mentioned previously, these consumers browse on mobiles before buying via any other means, but they think that products do not display properly on a small screen, they also have issues with the loading time. They may not purchase via mobile because they do not like the idea of making payments via mobile (over 56%) and think it is difficult (45%). The most important factors for using mobile devices for fashion shopping are as follow by the importance: the availability of products, the ability to shop from any location and at any time, the product is easy to find. Opinions of others are quite important for them. The majority of them are full-time students.

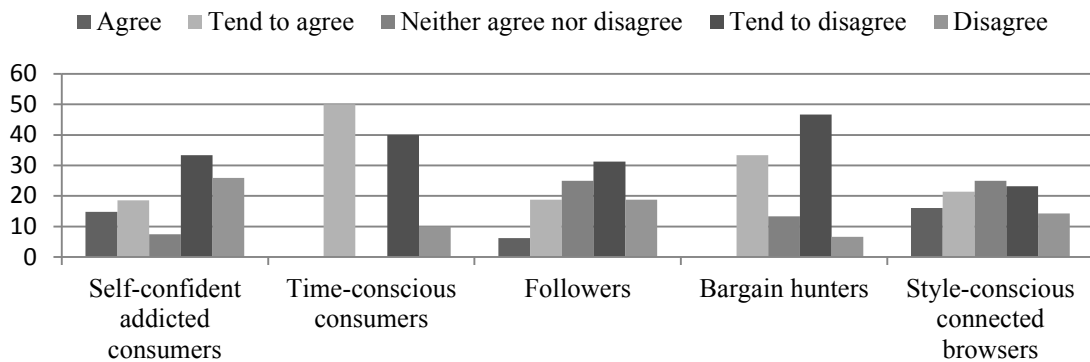


Figure 2. Usability of mobile device for browsing/shopping is poor. Comparison by mobile fashion segments, %.

The results show that there is a link between the propensity to purchase clothing via mobile and the display on the screen. Satisfaction with the display of products and websites on the screen of smart phones leads to a positive experience and a higher propensity to purchase apparel products in m-retail.

6 Conclusions and Recommendations for further research

This paper set out to determine the characteristics of mobile fashion consumers in the UK and to evaluate their behaviour. The results suggest that five groups of mobile fashion consumers - self-confident addicted shoppers, time-conscious consumers, followers, bargain hunters and style-conscious connected browsers - exist from the analysis of the data, and each group has their own shopping behaviour. Self-confident addicted consumers' group, accounting for 22% of the sample, is the most profitable segment to target for apparel retailers via mobile channel. Although all groups except the group of style-conscious connected browsers (45%), use mobile devices for fashion shopping, but the latter is a valuable segment to target because they use mobiles to research and purchase apparel products via other channels: 32% of them would purchase online on their laptop, and 29% in-store. In order to better understand the specific differences, attitudes and shopping experiences of each consumer group, shopping journey mapping was developed. This study requires larger-scale studies of behaviour patterns in m-retail, including details of customer spending patterns, and motivational factors, in order to develop a more rigorous typology. Although, as the first wave of the longitudinal study it has produced significant findings for further analysis of trends in m-retail.

This study has shown that, in terms of OS used for fashion shopping via mobile devices, iOS mobile devices might be better adopted by apparel companies. It would be useful to understand the reason for iOS to dominate Android OS. There is a need for further research of apparel retailers' adoption of the mobile channel.

The second major finding is that the majority of mobile fashion consumers prefer websites. This could be because there are not enough fashion mobile apps. The apps that exist are underdeveloped for the sophisticated fashion consumer. Although mobile optimized websites offer better usability and experience compared to desktop website versions consumers are choosing websites. Perhaps this is due to consumers being used to websites and just trying to avoid any changes. Do mobile optimized websites and mobile apps offer the same complete experience as classic websites?

As mobile becomes an increasingly popular tool for any activities related to shopping and browsing, retailers have not delivered a satisfactory shopping experience to fashion consumers. This suggests the need to investigate the actual display on a small screen and visual product's presentation in order to learn about a satisfactory product presentation to consumers.

This work contributes to the existing knowledge of mobile fashion marketing and consumer studies by providing a detailed account of mobile fashion consumers' attitudes towards the mobile channel. This

research will serve as a base for further studies and will help to develop a framework for mobile fashion consumer segmentation. Further research needs to be done to establish whether apparel retailers' mobile apps developed to date provide positive shopping experiences.

References

- Balasubramanian, S., Raghunathan, R. and Mahajan, V. (2005) 'Consumers in a multichannel environment: Product utility, process utility, and channel choice.' *Journal of Interactive Marketing*, 19(2) pp. 12-30.
- Chanaka, J., Len Tiu, W. and Charles, D. (2007) 'Consumers online: intentions, orientations and segmentation.' *International Journal of Retail & Distribution Management*, 35(6) pp. 515-526.
- Chong, A. Y.-L. (2013) 'Mobile commerce usage activities: The roles of demographic and motivation variables.' *Technological Forecasting and Social Change*, 80(7) pp. 1350-1359.
- Curran and Keith. (2013) 'The mobile future, Retail review February 2013.' [Online]. [Accessed on 15/03/2013].
- De Juan-Vigaray, M. D. and Sarabia-Sanchez, F. J. (2012) 'Using values and shopping styles to identify fashion apparel segments.' *International journal of retail & distribution management*, 40(3) pp. 180-199.
- eMarketer. (2012) *US Smartphone User Share, by OS, 2010-2014*. [Online] [Accessed on 15/03/2013] www.emarketer.com
- Experian. (2014) *UK Fashion Segments | Fashion Data, Analysis and Segmentation | Experian*. Differences. [Online] [Accessed on 19/02/2014] <http://www.experian.co.uk/business-strategies/fashion-segments.html>
- Fink, A. (2013) *How to conduct surveys: a step-by-step guide*. Los Angeles: SAGE.
- GTNexus. (2013) 'The Omnichannel Retail Supply Chain: How Technology and Networks Delivered in the Cloud Will Separate the Winners and Losers in the Eyes of Today's Consumer.' [Online]. [Accessed on 19/11/2013].
- Hanlon, A. (2013) *The Segmentation, Targeting and Positioning model - Smart Insights Digital Marketing Advice*. [Online] [Accessed on 14/02/2014] <http://www.smartinsights.com/digital-marketing-strategy/customer-segmentation-targeting/segmentation-targeting-positioning-model/>
- Harris, L. and Dennis, C. (2008) *Marketing the e-Business*. 2nd ed. ed., London: Routledge.
- Klas, H., Björn, L., Dag, E. and John, G. (2013) 'Customer segmentation based on buying and returning behaviour.' *International Journal of Physical Distribution & Logistics Management*, 43(10) pp. 852-865.
- Ko, E., Kim, E., Taylor, C. R., Kim, K. H. and Kang, L. I. (2007) 'Cross-national market segmentation in the fashion industry - A study of European, Korean, and US consumers.' *International marketing review*, 24(5) pp. 629-651.
- Lee, Q., Tony, H. and David, B. (2007) 'Making sense of market segmentation: a fashion retailing case.' *European Journal of Marketing*, 41(5/6) pp. 439-465.
- Magrath, V. and McCormick, H. (2013) 'Marketing design elements of mobile fashion retail apps.' *Journal of Fashion Marketing and Management*, 17(1) pp. 115-134.
- McDonald, M., DDC21. and Dunbar, I. (2004) *Market segmentation: how to do it, how to profit from it*. Oxford: Elsevier Butterworth-Heinemann.
- Pasqua, R. and Elkin, N. (2013) *Mobile marketing: an hour a day*. Hoboken, N.J Chichester: Wiley John Wiley [distributor].
- Sekaran, U. and Bougie, R. (2013) *Research methods for business: a skill-building approach*. Hoboken, NJ: Wiley.
- Shim, S. I. and Lee, Y. (2011) 'Consumer's perceived risk reduction by 3D virtual model.' *International journal of retail and distribution management*, 39(12) pp. 945-959.
- Verdict. (2011) *m-Commerce 2011*. (CM00147-001)
- Verdict. (2012a) *M-commerce in the UK 2012*. (CM00207-005)
- Verdict. (2012b) *E-retail in the UK 2012*. (CM00207-003)
- Youngjin, B., Doris, H. K. and Jung-ha, Y. (2013) 'College students' apparel shopping orientation and brand/product preferences.' *Journal of Fashion Marketing and Management*, 17(3) pp. 367-384.