Influence of user generated content in online shopping: impact of gender on purchase behaviour, trust, and intention to purchase

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Abstract: To investigate differences in gender in the influence of user generated content (UGC) on purchase behaviour, trust, and intention to purchase. UGC refers to online comments/opinions which can influence other users' purchase decisions. Quantitative data gathered through a survey of 232 undergraduates at an American university. UGCs have a greater influence on purchase intentions and trust for females. No gender differences were found in terms of UGC's influence for a gender-neutral product, propensity to read UGCs, frequency of purchase and authoring reviews. Insights are provided for managers interested in consumers' use of UGC. It is not only important to monitor what is being written, but also who is writing it. A better understanding of the target audience can serve only to enhance an organisation's marketing efficiency. This research attempts to address a relatively unmet need for research specifically addressing gender differences relating to UGC.

Keywords: online shopping; user generated content; UGC; gender effects on purchase behaviour; trust; intention to purchase.

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1 Introduction

Before online shopping became mainstream in traditional brick-and-mortar environments, retail sales associates were the primary source of information about manufacturers' products. Today, online shopping websites and social media platforms host product reviews and opinions for other users to consider before purchasing a product. This user generated content (UGC) offers consumers a medium to share opinions, preferences, and reviews in an interactive virtual community. UGC that is posted on websites and social media platforms is communication created by consumers who have purchased the product and are willing to share their experience with other consumers (Trusov et al., 2009). Most Web 2.0 platforms such as Facebook, Twitter, YouTube, Flickr, and Pinterest support the use of UGC and in fact thrive if there is user involvement in their online community. The online information market continues to shift toward a user-centric model and away from the conventional media model that is characterised as publisher-centric (Daugherty et al., 2008). Online shopping today has given rise to a new voice that is driven by consumer experiences with products. Close and Kukar-Kinney (2010) and Tifferet and Herstein (2012) called for a more detailed examination of consumer demographics, such as gender and age, as predictors of purchase intention while shopping online. The purpose of this study was to investigate the degree to which UGC can influence consumers' attitude and purchase intentions based on gender.

Forrester research stated that 2013 online retail sales were $262 billion but it is expected that there will be a 10% projected growth over the next five years (Mulpuru et al., 2013). The growth in online sales is caused by investments in multichannel capabilities and use of smartphones and tablet devices by consumers who tend to research an item online before purchase at either a brick-and-mortar store or online website. There has been a transition from traditional ecommerce to a new type of environment, often referred to as a new phenomenon called *social commerce*. Blog posts and reviews form a component of social commerce, which can serve to influence consumers' attitudes, decision making, and purchase intention. The internet therefore presents a social and economic opportunity for businesses to capitalise on electronic communities (Armstrong and Hagel, 1996). With the popularity of online shopping that has made information easily accessible, consumer information processing uses an integrated process where product attributes, specifications, and information available from images, videos, blogs, and reviews are used for product evaluation and to make a final purchase decision about the brand that will meet users' needs. The decision making process that leads to comprehension and attention is influenced by a consumer's motivation, ability, and opportunity to process salient information about their environment (Batra and Ray, 1986b). As a result, UGC has the potential to change attitude towards a product and/or

the ability of the consumer to form an opinion of the product that may affect propensity to make purchase decisions about the product.

Recent research has explored UGC related topics such as customer engagement, electronic word of mouth, online brand reputation management, customer relationship management, trust, purchase intention, and social network analysis (Chevalier and Mayzlin, 2006; Duan et al., 2008; Ghose and Ipeirotis, 2011; Hazari et al., 2016). This study fills the gap by investigating the role of gender in context of UGC. The purpose of this study was to investigate the degree to which UGC can influence consumers' attitude and purchase intentions based on gender. It investigates how gender affects the level of trust in UGC, and in turn, online purchases intention as well as other aspects of online buying behaviour. For this study, UGC is defined as reviews posted by other users for a product which can include comments, criticism, or self-experience about product features, design, utility, packaging or delivery. Another purpose of this study was also to add new knowledge of gender roles in online shopping since the internet and online shopping have become more mainstream. Research conducted from this perspective relies on the notion of theoretical explication to verify previous research in different contexts (Chaffee, 1996). Previous studies have looked at UGC in context of opinion leaders and influencers (Geissler and Edison, 2005; Goldsmith and Horowitz, 2006). This study seeks to add to the body of knowledge whether consumers are influenced by comments posted by individuals of a certain gender or to determine if UGC reviews are evaluated solely based on content of the communicated message (Walther, 1996). The expected outcome from this research can provide insights into purchase intention and buying behaviour by gender and how UGC interacts with decision making of male and female shoppers. If it is found that gender interaction with UGC plays a significant role as a motivator or driver in online shopping websites, then recommendations for better UGC targeted to specific gender can logically follow, especially on sites that have a primarily male or female audience (e.g., Pinterest) as target market. Online shopping websites can then choose to better integrate UGC with their product offering to affect buyer behaviour according to gender, which could increase sales of products because of supplementary UGC information provided on the website.

2   Review of literature

Consumers can make purchase decisions based on impulse, habit, intuition, emotion, or analysis. Once the purchase has been made, the product is used by the consumer and based on their experience with the product it can result in post-purchase evaluation that may in turn lead to creation of user comments. Online purchase intention has previously found to be influenced by factors such as information sharing and purchase action (Butcher et al., 2002). In addition, online consumers' attitude and intention can be greatly influenced by cognitive, psychological, and demographic characteristics (Fang et al., 2013). This is where UGC becomes an important component in the purchase decision process because it includes an object (i.e., brand), subject (i.e., consumer), and valence (positive or negative) (Hollebeek and Chen, 2014; Dessart et al., 2015). While companies have realised advantages offered by incorporating UGC on their websites to create trust and build a community around a product, the specific construct of gender related UGC, and the moderating influence of gender on purchase intention has not been looked at from the perspective of online shopping websites. UGC may have the potential to increase

sales of products, especially those that have a high number of positive reviews and active discussion using many questions/answers that have been populated by users of a certain gender. There is a need for research that investigates how gender-based UGC can affect purchase intention.

Previous research has emphasised the social capital and social practice aspect of community engagement (Wasko and Faraj, 2005; Faraj et al., 2011). Reasons why consumers create content have been studied by Daugherty et al. (2008) who found that consumers are motivated to create content because it helps them feel a sense of intrinsic wisdom. The researchers also found content creators feel gratified with a sense of self-esteem because they become members of an online community that shares the principles they consider important. Spivey et al. (1983) had attempted to determine which sources of attitude affects the relationship between different forms of advertising and purchase intention. They found attitude change depends on how well the message maps to a consumers' functional attitude schema. As a follow-up to existing research, the role of gender as a moderating variable can be further investigated.

3 User generated content

The term 'UGC' has a broad scope as evidenced from recent literature where researchers have conducted studies providing different context of UGC. Goldsmith and Horowitz (2006) found that consumers search for opinion from other consumers to reduce their risk and pre-purchase information. This shows the multifaceted nature of UGC. Previous studies have resulted in different conclusions related to UGC. Although there has been research done on UGC (e.g., Chevalier and Mayzlin, 2006; Lee et al., 2008; Gupta and Harris, 2010), most research has not focused on a consistent measurement of gender related attitudes and buyer intention impact by UGC on online shopping websites. For example, for online reviews of movie box office sales, Duan et al. (2008) found that online reviews do not affect sales. When looking at online book sales, Chevalier and Mayzlin (2006) found online reviews have positive effect on book sales. The type of comments made by reviewers also has been studied in regards to ability to influence sales. There is need for further research that looks at the impact of gender influenced UGC to change attitude and purchase intention of buyers. Since UGC can include comments on various attributes of a product, self-referent perception of consumers based on personal experience may vary. Cheong and Morrison (2008) observed that negative UGC can affect brand equity because detrimental effect of any negative reviews by other consumers can overshadow a positive marketing message provided by manufacturers. Additional information that is supplementary to product specifications and is provided in UGC can affect emotions in shoppers. Yoo et al. (1998) and Arnold and Reynolds (2003) found that positive emotions evoked in shoppers can influence their shopping behaviours. Although the consumer may not be consciously aware of all information included in UGC, the mere presence of UGC (positive or negative) may affect behaviour. Cheong and Morrison (2008) studied whether consumers trusted UGC more than paid product information. They found that people trusted other consumers more than information about the company itself. Research is needed to find out whether males or females are more engaged and affected by UGC in terms of attitude and purchase intention when either reading or authoring UGC. It would also be interesting to investigate if consumers

based on gender would provide less negative reviews, and/or put more weight on negative reviews provided by other customers of the same gender.

Social commerce that includes UGC has implications for branding because the popular social media networks (such as Facebook and Pinterest) that are primarily platforms for messaging and shared user communication, are now allowing brands to sell products on their sites. This makes UGC an integral part of the purchase decision for consumers. Large and small companies have realised the potential of significant revenues from social selling and are increasing their presence on social media networks by encouraging and rewarding consumers who interact with their brand. These implications are developed further in the discussion and managerial implications and the directions for future research sections.

4   Theoretical framework and hypotheses

The theoretical foundation of this study is based on a need to understand users' motivations to either read or create UGC, and share information with others by providing comments about product features and self-experience with the product. By understanding consumers' interaction and expectation of UGC, marketers can leverage UGC in their marketing strategy. The uses and gratification theory (Katz et al., 1974) can help us understand how and why people seek specific media channels (in this case, UGC) to satisfy specific needs. By sharing information, the theory states that consumers experience a gratification effect by becoming active participants in the media consumption process. Shao (2009) observed individuals consume content to meet their information needs, consumers then participate by interacting with content and creating social connections in virtual communities, then content is produced for self-expression and self-actualisation. This theory applies well to UGC since consumers look for products to purchase and share information about product experience by creating UGC which in turn helps guide others purchase behaviour. From a socio-psychological communication perspective (Ruggiero, 2000), ordinary consumers are now able to produce content that is *shared*, *tweeted*, *tagged*, *pinned*, or *liked*.

Gender can be used for segmentation so advertisers can tailor marketing communication to a target market based on characteristics such as information processing and decision making process of individuals within that segment. It is well documented in marketing literature that males and females respond differently to marketing promotion that is tailored to their specific needs or social roles (Darley and Smith, 1995; Dahl et al., 2009). While some products have the same value characteristics for males and females and are not advertised differently because they are non-gender specific, other products are marketed specifically to a particular gender. This is because of the differences in communication styles of males and females, and how marketing communication is processed as a result.

4.1   Reading/authoring UGC

Reading and authoring reviews for a product may have an impact on how messages regarding a product are processed in the cognitive schema of males and females. Rogers and Harris (2003) noted that females are less satisfied than males with their online shopping experience and males' value utility of online shopping more than females as a

result of marketing communication. There may be a difference in cognitive processing styles of males and females, which has implications for advertising effectiveness. Presi et al. (2014) mentioned the extent to which a person communicates using UGC after a purchase may be related to his or her personality. However, the possibility that gender may be a moderating factor in sharing information by using UGC has not been explored. Papyrina (2015) found if there is an opportunity for detailed information processing with promotional content, females engage in systematic consideration of message content. For the same type of content, males ignore the details and process the content in a heuristic manner (moderate level of cognitive effort). Also, in the same research, no gender differences were observed when the opportunity called for low information processing to understand the marketing message. Since the gender difference on types of products purchased online has not been studied in context of UGC, the following hypotheses are proposed related to marketing communication, specifically to determine if gender biases or preferences exist when reading or authoring user comments or reviews.

H1a For a gender-neutral product (such as a laptop), the gender of UGC author has no significant influence on online shoppers.

H1b For a gender-neutral product (such as a laptop), male online shoppers are not any more likely to be influenced by a UGC if it is obviously written by a male.

H1c For a gender-neutral product (such as a laptop), female online shoppers are not any more likely to be influenced by a UGC if it is obviously written by a female.

Previous research has found that males and females differ in emotional responses when exposed to advertising (Dahl et al., 2009). Part of the reason these differences may occur is due to different styles of processing information among males and females. Also, the nature of the advertising message as well as the type of product (low involvement or high involvement) may have an effect on differences between emotional and information processing between males and females. Batra and Ray (1986a) had observed that the type of media (e.g., electronic versus paper) may influence information processing. Television advertisements are fleeting which does not offer extensive elaboration on advertising arguments. The message in such cases is evaluated partially or superficially. In contrast, print media offers more control in reading and processing the message where the readers can choose their own pace to process the message and engage in greater thought (Papyrina, 2015). Since UGC provides a mix of the two conventional media formats, UGC interaction can be passive when consumers only read information, but UGC is most effective when consumers participate by adding comments which will in turn help other consumers. This participation can include user-to-content interaction, where comments about a product are left for other consumers to read, or user-to-user interaction where questions posed by other reviewers are answered (Shao, 2009). Based on their personality and social interaction, some online shoppers connect different social media networks to generate more interaction. Also, the type of information flow and processing in buyers who rely on the social context can depend on the values and previous knowledge of the shopper (Rezaei and Ismail, 2014). Some researchers have also attempted to study levels of participation in UGC as well as antecedents of consumers' motivation to participate in UGC (Yoo and Gretzel, 2011). Further research is needed to investigate gender differences in reading or authoring UGC as well as UGC influence on purchase intentions. H2 consists of sub-hypotheses on consumers' behaviour of reading UGCs, authoring reviews on online marketing sites, and making online purchases:

H2a   Females have a higher propensity to read UGCs.

H2b   UGCs have a greater influence on purchase intentions for females.

H2c   For online shopping websites such as Amazon, no difference is expected between the genders in terms of the reported frequency of online purchases.

H2d   Males are more likely to author reviews on online shopping websites.

4.2   Trust

Rezaei and Ismail (2014) stated that in the early days of ecommerce, trust was not able to be established because of the perceived risks of conducting online payments. As a result, online channel selection depended on perceived credibility of users. The source of credibility can impact the confidence of other group members to be receptive to persuasive UGC (Tormala et al., 2006). Messages that do not portray elements of trust, and are considered not as credible, may result in the UGC message being discounted so individuals may expend more effort in making a purchase decision (Kao, 2013). The trust factor in online environments has been studied by looking at how information processing affects attitudes and behaviour from a gender perspective. It was found that females show greater risk aversion and less trust when using the internet (Kim et al., 2007; Sanchez-Franco et al., 2009). However, in recent years, there are now more female users than male users on some of the most popular social media sites such as Pinterest. For example, Ottoni et al. (2013) investigated gender roles on Pinterest (a female dominant social media platform) and found that females reciprocate more, have higher involvement and interaction (trust), and use words that convey affection and positive emotion. They also found males are more assertive in communication and consider themselves as specialists but do not interact frequently. Females make more use of commercial nature of Pinterest while males curate items that are related to their personal taste. Females also showed a much higher satisfaction and loyalty of the social media sites in general than males (Lim et al., 2014). In this context, it is interesting to note that a review of the literature shows differing, and sometimes contradictory conclusions; for example, the conclusions of Kim et al. (2007) and Sanchez-Franco et al. (2009) indicate that females are less trusting of social media while other authors, Ottoni et al. (2013) and Lim et al. (2014), draw the opposite conclusion. So, this question is fertile ground for further research, which gives rise to our third set of hypotheses. Since the interaction, involvement, and dialog with other users may be related to trust, H3 consists of a set of sub-hypotheses on consumers' trust towards UGC on online shopping websites:

H3a   In general, females have a higher propensity to trust UGC.

H3b   Both males and females are likely to trust comments and reviews written by users who have purchased the product, by the 'average' user, and by their friends, more than they trust comments/reviews written by celebrities.

H3c   Females are more likely than males to trust comments and reviews written by their friends and those written by users who have bought the product.

4.3 Purchase behaviour

While gender differences and its role in affecting purchase decisions in a traditional shopping environment (non-online) has been studied by marketing researchers such as Meyers-Levy (1989) and Gentry et al. (2003) the role of online shoppers segmented by gender needs further investigation. Kim et al. (2007) called for research to better understand online users' attitudes and behaviours from a gender perspective. Consumers can have different motivation for posting UGC which can be a result of levels of expectations being met (or not met), experience with a product, or a desire to simply share information about the product. Males and females may further react differently to either reading or authoring UGC. Fisher and Grégoire (2006) showed that males are more task-oriented and analytic, while females tend to seek more information and rely on social groups to make purchase decisions. It may be possible that unique interests that appeal to each gender may guide purchase decisions. Han et al. (2015) reported that male and female users showed different purchase intention for products in terms of dedication, responsiveness, and sentiment which can be explained by the elaboration likelihood model (Petty et al., 1983). The model states that the level of cognitive processing has an impact on how a message can affect an attitude change and purchase intention. The type of shopping may have an effect on purchase intention. Previous studies (Tifferet and Herstein, 2012; Hazari et al., 2016) have found that users of online shopping websites exhibit two distinct forms of use of websites relative to purchase decisions: hedonic and utilitarian usage, where hedonic use refers to the enjoyment aspect of UGC, and utilitarian use refers to its practical benefits. This is similar to traditional retail channel shopping which was previously identified as a hedonic experience (Babin et al., 1994), where other factors beyond the utilitarian aspect of the product can influence actual shopping behaviour. In the case of utilitarian shopping, consumers' purchase intentions arise after they perceive utility and value of a product or service (Dodds et al., 1991). Das (2014) had noted that buying behaviour (hedonic as well as utilitarian) varies from males to females while shopping. In comparison to retail shopping in stores, the nature of online browsing may affect intention to purchase. For example, Close and Kukar-Kinney (2010) found that consumers involved with hedonic shopping may not be involved with reading UGC as much as those who are shopping with a utilitarian motive. H4 consists of a set of sub-hypotheses exploring similarities and differences between males and females relative to their hedonic and utilitarian use of online shopping websites.

H4a   Males and females each exhibit two distinct forms of use of websites relative to purchase decisions: hedonic (browsing websites for the enjoyment aspect) and utilitarian usage (browsing websites for the practical benefit).

H4b   For male online shoppers, utilitarian use of websites is more dominant than hedonic use.

H4c   For female online shoppers, hedonic use of websites is more dominant than utilitarian use.

Dholakia (1999) had found that males shop quickly and put minimum effort and energy, while females enjoy shopping and spend a considerable amount of time and energy. In addition, shopping motives of males differ from females (Dholakia, 1999). Das (2014) researched gender as a moderating variable between store image, attitudinal loyalty, behavioural loyalty, and purchase intention. It was found that positive impact of store

image on attitudinal loyalty, behavioural loyalty, and purchase intention varied across gender and is significantly stronger for females than males. Venkatesh and Morris (2000) found that although males and females are equally attentive to social cues, females pay more attention to those cues as they are more open to accept others' opinion. As a result, females place more weight on opinion of others which informs their decision making process. This finding is consistent with other research (Lee and Kozar, 2009; Dunne et al., 2010) that noted online shopping websites and social media platforms can satisfy either personal, functional, or social needs by stimulating further viewing of products (which may affect females more than males since it is related to hedonic behaviour) or offer a variety of products (which may be of interest more to males than females since it is related to utilitarian behaviour). H5 examines the significant determinants of intention to purchase based on UGC on online shopping websites.

H5a   For both males and females, the following variables are determinants of intention to purchase based on UGC:

   1   reading user comments or reviews

   2   trust in user comments or reviews

   3   utilitarian use of user comments of reviews

   4   hedonic use of user comments of reviews.

H5b   While both utilitarian use and hedonic use of UGC are significant determinants of intention to purchase based on UGC, for both males and females, utilitarian use is more of a significant determinant of intention to purchase based on UGC for males and hedonic use is more significant in determining intention to purchase for females.

van der Heijden et al. (2003) investigated consumers' purchase intentions using models of technology and trust. In their research, it was found that there is an impact of trust on perceived risk, and an impact of perceived risk on attitude towards online purchasing. However, since the research was conducted for in-store purchase intention, there is a need to study intention to purchase based on UGC in online environments as well as any moderating effects of gender. Brown et al. (2003) in one of the earliest studies of internet shopping behaviour had determined that factors more likely to influence purchase intention include product type, prior purchase experience, and gender. Trust in online purchasing is an important component in creating repeat visitors to a website or creating a community of users who are confident about expected outcomes as a result of their purchase (Burke, 2002; Kim et al., 2008).

   With online shopping being convenient, but there being an element of trust and risk regarding product quality, UGC plays a role in establishing trust as a result of comments posted by previous purchasers of the product. Gefen and Straub (2004), and Ling et al. (2010) had found that higher the degree of trust, the higher will be the degree of consumers' purchase intentions. To build trust and long-term, sustainable, and sociocultural relationships with customers, Hong and Minor (2014) observed that marketers are launching their own firm-led virtual communities, which function as a new type of online trusted brand community, called value co-creation web. Brand communities are also formed voluntarily by proactive consumers who desire to share knowledge and experiences regarding a brand. Users contribute to the community and establish a synergistic environment of proactive consumers who share online social ties to

contribute to the construction of a brand community that is built as a result of emotional bonding, trust, and commitment (Brodie et al., 2013). Satisfaction that can result from identification with online brand community can affect a users' level of engagement and trust with a brand (Brodie et al., 2011) as a result of value obtained from group participation (Gummerus et al., 2012).

The next set of hypotheses is based on the extrapolated findings of the aforementioned review of the literature on the trust construct. So as to investigate further the relationship between trust, frequency of authoring reviews, and intention to purchase based on UGC, the following two hypotheses are proposed:

H6   For both males and females, the frequency of purchase behaviour is positively associated with:

    H6a   Intention to purchase based on UGC.

    H6b   Consumer trust in UGC.

By reading, writing, and sharing UGC, the quality of communications on which purchase decisions can be made is improved, and purchase experiences are shared among online shoppers. For UGC to be successful in influencing purchase decisions, Rezaei and Ismail (2014) found that shoppers relying on UGC must be comfortable in accepting procedural suggestions from social media, which implies trust and credibility in other members' knowledge. The source of credibility and quality of messages could impact the confidence of other group members to be receptive to persuasive UGC (Tormala et al., 2006). Messages that do not portray elements of trust and are considered not as credible can result in the UGC message being discounted so individuals may expend more effort in making a purchase decision (Kao, 2013). Since interaction and engagement is related to trust with UGC and can affect purchase intention, the following set of hypotheses is proposed:

H7   For both males and females, the frequency of authoring reviews on online shopping websites is positively associated with:

    H7a   Intention to purchase based on UGC.

    H7b   Consumer trust in UGC.

5   Method

Quantitative data were gathered through a questionnaire-based survey of 232 undergraduate business students enrolled at a university in the South East USA; 160 (69%) of these identified themselves as female and 71 (31%) as male (one did not respond to the gender question). This gender ratio was found to be not significantly different from the undergraduate gender ratio at the university, positively impacting the reliability of the sample. Respondents were provided information on the purpose of the study. An example of Amazon.com user review showing an actual product was presented in the introduction section of the questionnaire to make respondents familiar with the frame of reference that was being studied in this research. The survey was developed by the authors with construct measures using review of literature and was delivered electronically using online survey method. Following the introduction section and the user review example, the survey provided Likert scale items related to UGC as a variable

affecting constructs such as purchase intention and social influence of user reviews and comments. The five-point Likert response scale ranged from 'strongly disagree' to 'strongly agree'. These items captured preferences related to the impact of UGC in decision making processes of males and females, including impact related to trust while considering or making a purchase. The survey then asked for demographic information. Sin and Tse (2002) had showed demographic variables such as education, gender, age, and internet use impact online purchase intention, so including demographic information was relevant to study in the context of UGC. IRB approval was obtained from the university committee to administer the survey to students.

Prior to administration of the survey, it was pilot tested with a group of respondents that included faculty and students (not counted in the actual sample). Feedback from the group was incorporated in the final version of the survey that was given to 232 respondents included in this study. Content validity of survey items was established by two faculty members in the marketing department in the college of business.

6   Data analysis and results

6.1   Exploration of gender biases or preferences in influence of UGCs

H1 explores if gender biases or preferences exist in terms of influence of user comments or reviews for a gender-neutral product. So, the first step was to conduct discussions with groups of students to generate examples of gender-neutral products. A consensus quickly emerged in favour of a laptop being a good example of such a product, and so the questionnaire used that as an example.

Table 1   Test for gender bias

	Male respondents			Female respondents			p-based on independent samples t-test (male vs. female)
	Mean	Std. deviation	Std. error mean	Mean	Std. deviation	Std. error mean	
When purchasing a laptop, I am more likely to be influenced by a user comment/review if it is obviously written by a female	$2.61^@$	1.049	.124	$2.47^@$	1.011	.080	.345
When purchasing a laptop, I am more likely to be influenced by a user comment/review if it is obviously written by a male	$2.62^@$	.976	.116	$2.55^@$	1.048	.083	.621
When purchasing a laptop, it makes no difference to me if a user comment/review has been written by a male or female	4.23^*	.865	.103	4.33*	.799	.063	.612

Notes: $^@$Mean significantly less than 3.0 at 0.05 level of significance (based on one-sample t-test).
       *Mean significantly greater than 4.0 at 0.05 level of significance (based on one-sample t-test).

To test H1, three direct questions were asked to respondents:

- 'when purchasing a laptop, I am more likely to be influenced by a user comment/review if it is obviously written by a female'

- 'when purchasing a laptop, I am more likely to be influenced by a user comment/review if it is obviously written by a male'

- 'when purchasing a laptop, it makes no difference to me if a user comment/review has been written by a male or female'.

Results are reported in Table 1, separately for males and females. First, it should be noted that there are two distinct tests reported in Table 1. The first six numerical columns refer to a one-sample t-test which tests the mean value to a Likert scale value of 3 (the mid-point of the scale) and 4 ('agree') as appropriate. The last column of the table refers to independent samples t-tests comparing males vs. females. There are several conclusions to be drawn:

- The extent of agreement to the question, 'when purchasing a laptop, I am more likely to be influenced by a user comment/review if it is obviously written by a female' was 2.61 for male respondents and 2.47 for female respondents on a five-point Likert scale. These were among the lowest scores given in the entire study. These means were found to be significantly less than 3.0, the mid-point of the scale ($p = .002$ for males and $p = .000$ for females). It is safe to say that this statement is not supported by the target audience.

- The extent of agreement to the question, 'when purchasing a laptop, I am more likely to be influenced by a user comment/review if it is obviously written by a male' was 2.62 for male respondents and 2.55 for female respondents on a five-point Likert scale. These too were among the lowest scores given in the entire study. These means were found to be significantly less than 3.0, the mid-point of the scale ($p = .002$ for males and $p = .000$ for females). It is safe to say that this statement is not supported by the target audience.

- The extent of agreement to the question, 'when purchasing a laptop, it makes no difference to me if a user comment/review has been written by a male or female' was 4.23 for male respondents and 4.33 for female respondents on a five-point Likert scale. These means were found to be significantly greater than 4.0 (agree); $p = .031$ for males and $p = .000$ for females. It is safe to say that this statement is strongly supported by the target audience.

- All three preceding bullets indicate that *the gender of the writer of UGC* makes no difference to the respondent.

- An independent samples t-test showed that there were no significant differences in the above means between male and female respondents. The p values represent the lack of significance for the independent samples t-tests. In other words, female respondents are not disposed to regard UGCs from females any more positively than male respondents do, and correspondingly, male respondents are not disposed to regard UGCs from males any more positively than female respondents do.

- The preceding bullet indicates that *the gender of the respondent* makes no difference to the score on these questions. No gender biases were found among either male or female respondents in terms of the influence of UGCs.

Thus, all the sub-hypotheses of lack of gender bias in H1 were supported.

6.2 Exploration of gender differences in reading UGCs, UGC influence on purchase intention, authoring reviews on online marketing sites, and making online purchases

H2a states that females have a higher propensity to read UGCs. A question was asked to determine propensity to read UGCs: 'when I am online shopping for a product, I usually read the user comments/reviews'. While females had the numerically higher score, no significant difference was found between males (m_m = 4.35) and females (m_f = 4.45). So, H2a is not supported.

H2b states that UGCs have a greater influence on purchase intention for females. To test H2b, the questionnaire included seven questions that assessed the influence of UGCs on purchase intention. These are shown in Table 2.

Table 2   The influence of UGC on intention to purchase: gender differences

Gender		Mean	Std. deviation	Std. error mean	p
P_I feel good purchasing a product that has positive user comments/reviews	Male	4.31	.689	.082	
	Female	4.57	.661	.052	.009*
P_If the majority of user comments/reviews are negative, I would not purchase the product	Male	4.01	.853	.101	
	Female	4.20	.796	.063	.117
P_If the majority of user comments/reviews are positive, I would purchase the product	Male	3.85	.786	.093	
	Female	4.04	.748	.059	.084
P_User comments/reviews of a product are important while making a purchase decision	Male	3.97	.828	.098	
	Female	4.27	.735	.058	.010*
P_Reading user comments/reviews of a product would change my mind about purchasing a product	Male	3.80	.786	.093	
	Female	4.02	.716	.057	.050*
P_User comments/reviews have in the past influenced my purchase decision	Male	4.01	.712	.085	
	Female	4.23	.665	.053	.036
P_User comments/reviews are likely to influence my future purchase decisions	Male	3.93	.748	.089	
	Female	4.16	.710	.056	.028*
Composite average of the above 7 'intention to purchase based on UGC' variables	Male	3.98	.524	.063	
	Female	4.22	.492	.039	.002*

Note: *Represents a significant difference between males and females at the 0.05 level of significance.

Table 2 shows that significant differences between males and females were found on five of the seven items, and on all of them (including those which were not significant), females had the higher score.

A composite measure of the influence of UGC on intention to purchase was constructed from these seven items. It is noteworthy that the seven-item scale for influence of UGC on intention to purchase has considerable reliability with Cronbach's alpha for the survey items when considering only male respondents = 0.80, and Cronbach's alpha for the survey items when considering only female respondents = 0.84.

In subsequent analysis in this paper, only the composite measure/construct is used for the influence of UGC on intention to purchase.

Unsurprisingly, females also had significantly higher scores on the composite average. Thus H2b is supported in that females show a significantly higher influence of UGC on intention to purchase.

H2c states that for online shopping websites such as Amazon (i.e., not sites such as those focused only on women's clothes), no difference is expected between the genders in terms of the reported frequency of online purchases.

H2d states that males are more likely to author reviews on online shopping websites.

To test these hypotheses, the following questions were included in the questionnaire:

- How many times have you purchased from Amazon.com within the last six months?

- How many times have you written a review for a product on an online website?

The results of an independent samples t-test, shown in Table 3, indicate no significant differences between the genders for either of these two questions. Thus, H2c is supported but H2d is not supported.

Table 3   Purchase behaviour and review authoring behaviour: gender differences

		Mean	Std. deviation	Std. error mean	p
How many times have you purchased from Amazon.com within the last six months?	Male	2.32	.824	.098	.332
	Female	2.44	.943	.075	
How many times have you written a review for a product on an online website?	Male	1.73	.827	.098	.398
	Female	1.84	.958	.076	

6.3   *Exploration of gender differences in trust in UGCs*

H3 refers to the important construct of trust in UGCs on online shopping websites. To test H3, the questionnaire included five questions on trust in the typical user comments or reviews (plus a specific one for comments from celebrities which will be discussed later). These five questions are shown in Table 4.

In Table 4, an independent samples t-test showed that significant differences between males and females were found on two items, and on all of them (including those which were not significant), females had the higher score. Unsurprisingly, females also had significantly higher scores on the composite average score for Trust. Thus H3a is supported in that females have higher propensity to trust UGCs. In subsequent analysis in this paper, only the composite measure/construct for Trust is used.

Additionally, while the following question is not intended to be part of the above construct, it was asked just as a basis for comparison to the other trust variables (as a test of H3b):

- 'I trust reviews from celebrities I follow on social networking websites'.

This variable had a mean of only 2.61 for males and 2.49 for females. Several conclusions are drawn here:

- There is no significant difference between this 'trust for reviews from celebrities' variable between males and females (p = .422).

- The 'trust for reviews from celebrities' variable not only had a score considerably lower than any of the trust variables shown in Table 4, but it was the only Likert variable in the entire set of usage, purchase intention, or trust variables to have a mean value of less than 3 (the mid-point of the scale). Further, it was significantly less than 3.0 for both males and females (p = .005 for males and p = .000 for females). This analysis leads to the conclusion that celebrity reviews are not particularly well regarded at all.

H3b states that both males and females trust comments and reviews written by those who have bought the product, by the 'average' user, and by their friends, more than they trust comments/reviews written by celebrities. Based on the comparison of the means in Table 4 with those of the 'trust for reviews from celebrities' variable reported in the previous paragraph, H3b is strongly supported.

H3c states that females are more likely than males to trust comments and reviews written by their friends and those written by users who have bought the product. Examination of Table 4 indicates that this is in fact true. However, it is fair to point out that the mean for females on the 'trust of friends' comments' variable, while significantly greater than that for males, is still found to be significantly less than 4.0 on a five-point Likert scale (the raw score is 3.87, significantly higher than 3.0). On the 'users who have bought the product' item, females do indeed have a score significantly higher than 4.0 (p = .008), while males have a score not significantly different from 4.0 (p = .211). H3c is supported.

Table 4   Trust: gender differences

Gender		Mean	Std. deviation	Std. error mean	p
T_I believe user reviews of a product are more beneficial than manufacturer provided information	Male	4.04	.853	.101	
	Female	4.07	.935	.074	.830
T_I trust user comments/reviews of a product to be reasonably accurate representations of a product	Male	3.72	.637	.076	
	Female	3.84	.808	.064	.211
T_I would trust a product review posted by an average user more than a product review posted by an expert	Male	3.17	1.159	.138	
	Female	3.41	1.020	.081	.135
T_I trust reviews from friends or people I follow on social networking websites	Male	3.58	.936	.111	
	Female	3.87	.840	.066	.026*
T_I trust user comments/reviews from people who have purchased the product	Male	3.90	.667	.080	
	Female	4.15	.704	.056	.011*
Composite average of the above five 'trust' variables	Male	3.68	.485	.058	
	Female	3.88	.560	.045	.008*

6.4 Exploration of evidence of hedonic and utilitarian usage of online shopping websites within genders

Hazari et al. (2016) found the existence of hedonic and utilitarian usage of online shopping websites, but did not examine any gender differences in such usage. The current analysis extends that research by way of the sub-hypotheses of H4 to explore if there is evidence of hedonic and utilitarian browsing behaviour on the part of males and females relative to purchase decisions from online shopping websites. The hypothesis was that males and females exhibit hedonic and utilitarian use of UGC. The means (on a standard Likert five-point scale) are shown in Figure 1.

Figure 1   Utilitarian and hedonic use – means (see online version for colours)
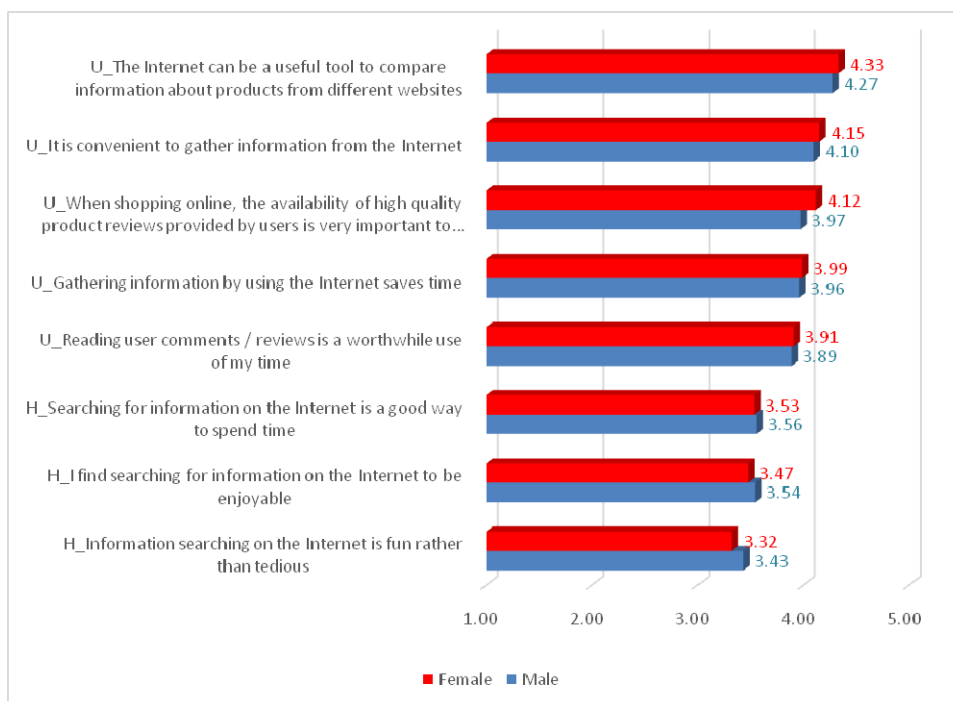
The following findings are noteworthy:

- All eight measures show means significantly (p = .05) above the midpoint (3.0) indicating that both males and females tend to agree with all eight statements.

- For both males and females, the three hedonic measures are rated lower than the five utilitarian measures, indicating that hedonic use is less prevalent than utilitarian use.

- For both males and females, hedonic use is significantly less than 4.0 (i.e., agree) at p = 0.05.

- For both males and females, at p = .05, utilitarian use is either not significantly different from 4.0 (i.e., agree) or is significantly higher than 4.0 on a five-point scale ('can be a useful tool').

- Independent samples t-tests show that there are no significant differences between males and females on each item for any of the above findings. Females have marginally higher scores on the utilitarian use items, and marginally lower scores on the hedonic items, but none of these differences are significant at the 0.05 level, as indicated in the boxes on the bars.

The last bullet above was a result of an independent sample t-test to test for differences between the genders. The next test, a paired samples t-test, shown in Table 5 is intended for a different purpose – it shows that, separately for each gender, utilitarian use was significantly greater than hedonic use at the 0.001 level. The mean difference between the two was found to be 0.66 on a five-point scale for females, and 0.53 for males. This supports the previous finding from Figure 1 that females exhibit marginally (though not significantly) more utilitarian behaviour in their use of UGC.

Table 5   Paired samples t-tests: utilitarian vs. hedonic for females and males

What is your gender?			*Mean*	*N*	*Std. deviation*	*Std. error mean*	*p*
Male	Pair 1	Composite average of five utilitarian variables	4.04	69	0.487	0.059	<.001
		Composite average of three hedonic variables	3.51	69	0.876	0.105	
Female	Pair 1	Composite average of five utilitarian variables	4.10	154	0.575	0.046	<.001
		Composite average of three hedonic variables	3.44	154	0.841	0.068	

Note: * Represents a significant difference between males and females at the 0.05 level of significance.

Factor analysis in Tables 6a and 6b shows that the variables load clearly on to these two factors – hedonic and utilitarian use – for both genders.

Table 6a   Females: rotated component matrix

	Component	
	1	*2*
H_Information searching on the internet is fun rather than tedious	.332	.735
H_Searching for information on the internet is a good way to spend time	.251	.803
H_I find searching for information on the internet to be enjoyable	.236	.883
U_It is convenient to gather information from the internet	.762	.269
U_Gathering information by using the internet saves time	.696	.249
U_Reading user comments/reviews is a worthwhile use of my time	.603	.311
U_The internet can be a useful tool to compare information about products from different websites	.724	.139
U_When shopping online, the availability of high quality product reviews provided by users is very important to me	.700	.268

Table 6b   Males: rotated component matrix

	Component	
	1	*2*
H_Information searching on the internet is fun rather than tedious	.823	.118
H_Searching for information on the internet is a good way to spend time	.859	.077
H_I find searching for information on the internet to be enjoyable	.835	.184
U_It is convenient to gather information from the internet	.436	.489
U_Gathering information by using the internet saves time	−.014	.665
U_Reading user comments/reviews is a worthwhile use of my time	.143	.764
U_The internet can be a useful tool to compare information about products from different websites	.411	.536
U_When shopping online, the availability of high quality product reviews provided by users is very important to me	.134	.718

Scales were constructed for each of these constructs. Reliability analysis showed acceptable results:

- Cronbach's alpha for the hedonic use items when considering only male respondents was 0.83 and Cronbach's alpha for the hedonic use items when considering only female respondents was 0.81

- Cronbach's alpha for the utilitarian use items when considering only male respondents was 0.70 and Cronbach's alpha for the utilitarian use items when considering only female respondents was 0.79.

Composite measures were constructed for each, and unsurprisingly, as shown in Table 5, the mean of the composite utilitarian measure was higher than that of the composite hedonic measure for both males (m_u = 4.04 vs. m_h = 3.51) and females (m_u = 4.10 vs. m_h = 3.44). An independent samples t-test showed no significant differences for the composite measures between males and females; p = .612 for the hedonic composite average and p = .417 for the utilitarian composite average.

H4a stated that males and females both exhibit two distinct forms of use of websites relative to purchase decisions: hedonic and utilitarian usage. Based on the findings of Figure 1 and the results of the factor analysis (shown in Tables 5, 6a, and 6b) and the reliability analysis (Cronbach's alphas) reported in the above bullets, H4a is supported.

H4b stated that utilitarian use of websites would be more dominant than hedonic use for males, and hedonic use is more dominant for females. This hypothesis is not supported. In fact, females had numerically higher scores than males on all the utilitarian measures and numerically lower scores than males on all the hedonic measures, but none of these differences were statistically significant. Neither were significant differences found for the composite measures between males and females.

6.5   Determinants of UGC's influence on intention to purchase for each gender

H5 examines the significant determinants of UGC's influence on intention to purchase for males and females. Regression analysis was done separately for males and females with UGC's influence on intention to purchase as the dependent variable and, as independent variables, composite measures of Hedonic use of UGC, Utilitarian use of UGC, consumers' Trust in UGC, and whether the consumer usually reads user comment and reviews. The results are shown in Table 7.

Table 7   Regression analyses

	Standardised coefficients	*t*	*Sig.*
	Beta		
Males: adjusted R^2 = 0.594			
Composite average of the five 'trust' variables	.434	4.978	.000
Composite average of the five 'utilitarian use' variables	.310	3.339	.001
When I am online shopping for a product, I usually read the user comments/reviews	.255	2.688	.009
Females: adjusted R^2 = 0.583			
Composite average of the five 'trust' variables	.347	5.627	.000
Composite average of the five 'utilitarian use' variables	.327	5.156	.000
When I am online shopping for a product, I usually read the user comments/reviews	.297	4.902	.000

Note: Dependent variable: intention to purchase based on UGC.

The adjusted R^2 for each regression is of the order of 0.6. The F value is significant at the 0.000 level.

For both, the male and the female regressions, consumers' behaviour of reading UGC is found to be a significant determinant of intention to purchase based on UGC.

In both the male and female regressions in Table 7, the composite trust measure is found to be a significant determinant of intention to purchase based on UGC.

H5a states that both utilitarian use and hedonic use of UGC are significant determinants of intention to purchase based on UGC, for both males and females. In neither of the preceding regressions in Table 7 for males or females do hedonic measures show up as being a significant determinant of intention to purchase. The utilitarian composite, however, is significant for both males and females.

Thus, with the exception of the hypothesised influence of hedonic use of UGC, the first three parts of H5a are supported.

H5b states that utilitarian use is more of a significant determinant of intention to purchase based on UGC for males and hedonic use is more significant in determining intention to purchase for females. Based on the previous paragraph and Table 7, no such difference between genders is found. H5b is not supported.

6.6 Analysis by level of purchase behaviour

A question was asked about past purchase behaviour from online shopping websites (with Amazon.com being used as an example):

Q3 How many times have you purchased from Amazon.com within the last six months?

- zero times (1)
- one to three times (2)
- four to seven times (3)
- more than seven times (4).

H6 states that, for both males and females, the frequency of purchase behaviour is positively associated with:

a intention to purchase based on UGC

b consumer trust in UGC.

An ANOVA was done to test whether the level of purchase behaviour for both genders was associated with an increased score on the influence of UGC on intention to purchase and trust composite constructs. The results are shown in Tables 8a and 8b.

Table 8a Analysis of composite variables by level of purchase behaviour: males

How many times have you purchased from Amazon.com within the last six months	0 times	1–3 times	4–7 times	> 7 times	Mean	Std. dev.	Std. error mean	p
Influence of UGC on purchase intention seven-item composite average	3.83	3.86	4.17	*4.26*	3.98	.524	.063	.067
Trust five-item composite average	3.42	3.62	3.78	*4.10*	3.68	.485	.058	.029*

Table 8b Analysis of composite variables by level of purchase behaviour: females

How many times have you purchased from Amazon.com within the last six months	0 times	1–3 times	4–7 times	> 7 times	Mean	Std. dev.	Std. error mean	p
Influence of UGC on purchase intention seven-item composite average	4.01	4.24	4.22	*4.35*	4.22	.492	.039	.094
Trust five-item composite average	3.61	3.87	3.93	*4.04*	3.88	.560	.045	.043*

In Tables 8a and 8b, the highest value in each row is noted in italics. The tables show that the greater the number of online purchases, the higher the score on each variable, though only Trust is significant at the 0.05 level. Thus, there is at least partial support for both sub-hypotheses.

6.7 *Analysis by level of online review authoring behaviour*

A question was asked about the number of online reviews authored on websites:

Q4   How many times have you written a review for a product on an online website?

- zero times (1)
- one to three times (2)
- four to seven times (3)
- more than seven times (4).

H7 states that, for both males and females, the frequency of online review authoring behaviour is positively associated with:

a   intention to purchase based on UGC

b   consumer trust in UGC.

An ANOVA was done to test whether the frequency of online review authoring behaviour for both genders was associated with an increased score on the influence of UGC on purchase intention, and trust composite constructs. The results are shown in Tables 9a and 9b.

Table 9a   Analysis of composite variables by frequency of authoring reviews on online shopping websites: males

How many times have you written a review for a product on an online website	0 times	1–3 times	4–7 times	> 7 times	Mean	Std. dev.	Std. error mean	p
Influence of UGC on purchase intention seven-item composite average	4.04	3.92	3.79	*4.43*	3.98	.524	.063	.251
Trust five-item composite average	3.66	3.73	3.48	*4.00*	3.68	.485	.058	.384

Table 9b   Analysis of composite variables by frequency of authoring reviews on online shopping websites: females

How many times have you written a review for a product on an online website	0 times	1–3 times	4–7 times	> 7 times	Mean	Std. dev.	Std. error mean	p
Influence of UGC on purchase intention seven-item composite average	4.07	4.37	4.18	*4.39*	4.22	.492	.039	.003[*]
Trust five-item composite average	3.76	3.96	3.87	*4.09*	3.88	.560	.045	.087

In Tables 9a and 9b, the highest value in each row is noted in italics. The higher scores are associated with higher level of online review authoring behaviour, though only one of them is significant at the 0.05 level. Thus there is at least partial support for both sub-hypotheses.

7 Discussion and managerial implications

There is considerable interest from business and industry regarding marketing on online shopping websites and social media networks. Marketers often segment markets on the basis of demographic information which is widely available and often related to consumers' buying and consuming behaviour (Wedel and Kamakura, 2012). A better understanding of the target audience – specifically gender – can serve only to enhance an organisation's marketing efficiency. Marketers need to keep in mind that women and men do not make consumer decisions in the same way (Lee et al., 2011). Since gender can be used for segmentation, the findings support that now marketers can use UGC to influence the sale of products and services based on how UGC will be processed according to gender. This is consistent with research by Ottoni et al. (2013) who found that it is important to understand gender differences in online platforms, so one can design services and applications that leverage human social interactions and provide more targeted and relevant user experiences. Our research provides critical evidence to practitioners towards developing more effective and efficient UGC management practices by focusing on gender differences.

By understanding consumers' interaction and expectation of UGC in the context of Uses and Gratification theory, marketers can leverage UGC in their marketing strategy by allowing consumers to feel empowered by sharing their product experience to guide purchase decisions of others. In recent years consumers have taken a larger role in driving the success of products in the marketplace. By using the Uses and Gratification theory, this research added important contribution to theoretical perspectives to provide further understanding of how gender affects the level of trust in UGC, and in turn, online purchase intention and aspects of online buying behaviour. Brand media messages previously came directly from companies. Ever since online marketing has become popular, company messages can be amplified or mitigated by brand messages created by ordinary consumers on social networks. Consumer empowerment has therefore affected brand management beyond what can be controlled by companies (Arnhold, 2010). One reason could be that the trust factor has been shown to be higher for UGC as compared to company branded messages (Ling et al., 2010). Social commerce has given rise to brand related UGC which involves personal brand messages that are created by users who have purchased or used a product. Burmann (2010) stated that UGC can be considered to be 'brand touch points' next to corporate communication efforts. This creates a potential to affect consumer experience with the brand, as well as brand expectations. In applied market research, UGC can therefore be used by companies for idea generation as well as brand-consumer interaction which can in turn help with customer acquisition and customer retention.

In the section on development of hypotheses, the conclusions of Kim et al. (2007) and Sanchez-Franco et al. (2009) indicated that females were less trusting of social media while those of Ottoni et al. (2013) and Lim et al. (2014), came to the opposite conclusion. This led to fertile grounds for further investigation, leading to the finding that, in general, females have a higher propensity to trust UGCs. Interestingly, women were found to be more likely to trust comments written by friends and purchasers of the product. This is consistent with the research of Venkatesh and Morris (2000) who found that females are more open to accept others' opinion. The findings support the notion that both men and women trust comments written by friends, users, and purchasers of the product. Based on this finding, marketing managers should encourage purchasers to not only write

comments on the store website but also post comments on the individual's social media (i.e., Facebook, Twitter, etc.). Kim and Johnson (2016) found that positive brand-related UGC exerts a significant influence on brand as it provokes consumers' word of mouth behaviour, brand engagement and potential brand sales. From a practical perspective, this study has valuable implications for marketing managers. Gender differences in the perception of UGC are important for developing an effective marketing strategy. A major case in point would be for organisations to realise that men and women do not always see UGC the same way. In this sense, companies need to be aware of the differences in order to adapt their marketing strategy.

Based on the findings of this study, the following conclusions are provided to enable marketing managers to better understand the role of gender in UGC's. First, the findings support that there is no difference between gender to be influenced by which gender authored the user comments, regardless if the comments were written by males or females. It was also found that females do not have a higher propensity to read comments, but the comments have a greater impact on purchase intentions. This suggests that UGCs have the potential to drastically transform the way in which female consumers search for product information and make purchase decisions. For both males and females, the frequency of purchase behaviour was not positively associated with intention to purchase based on user comments. However, there was a positive association with consumer trust. These findings support the earlier finding of trust in the user comments. Both males and females indicated a positive association between frequency of authoring reviews and intention to purchase. The association between frequency of authoring reviews and trust was only partially supported. These findings support the notion that managers should encourage individuals to write comments and reviews. Based on the findings, both men and women were found to exhibit hedonic and utilitarian usage of websites relative to purchase decisions. Also, women are marginally more utilitarian in their use of user comments. Although it was not statistically significant, this is a point marketing managers should consider. For example, managers could encourage more useful comments. As a managerial implication, marketers should not only provide useful information, but also an active interaction virtual arena using social media in order to create positive consumer marketing messages and increase online shopping value. When trying to identify the significant determinants of intention to purchase based on user comments, the utilitarian composite was significant for both males and females. Also, reading user comments and trust factor in user comments were found to be statistically significant. Therefore, while completing transactions at websites is one important e-commerce goal, companies should not lose sight of the continuing importance and power of their e-commerce website as an information and communications vehicle.

The findings of this research provide important insights for managers who are interested in UGC. UGC represents personal interpretations of company-owned brands (Pitt, 2006) by creative consumers (Berthon et al., 2007). It is not only important to monitor what is being written, but also who is writing it. A trend has emerged where companies have started using social influencers (brand advocates) to promote products by encouraging customer engagement in communities, blogs, networks, and social media platforms (Hazari et al., 2016). Online retailers should offer a user-friendly platform for individuals to provide user comments and reviews. In particular, individuals who have purchased a product should be encouraged to write comments. Also, by placing like/share/pin buttons in UGC comments, purchasers can be encouraged to share these comments with connections on their social network.

8   Limitations and directions for future research

One limitation of this study is that it analysed subjects' reported behaviour rather than their actual behaviour. This strategy may have introduced a source of measurement error that can be eliminated in future studies by monitoring subjects' actual behaviour as they interact with UGC by reading or posting reviews and tracking purchase decisions. The example of a laptop was used as a gender-neutral product based on recommendations that emerged from a pilot group of respondent members (who were not included when data was collected for the study). Results may be different if other gender-neutral products were used. Another limitation of the study pertains to the survey items that asked for feedback on UGC across all products. It may have been more beneficial, for example, to select gender-specific products that could have been further categorised as one low involvement and another high involvement product. Subjects could have been asked to look through these products before answering questions about UGC.

Future research could look at how age, in addition to gender, may affect receptivity and attitude towards purchase behaviour, trust, and intention to purchase as a result of reading or authoring UGC. Since UGC occurs without company input, qualitative and quantitative aspects of user interaction with the brand as well as reactions to company communication in response to UGC remain to be researched. Additional research can also investigate if UGC outcomes are different between volume brands in comparison to premium brands.

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