Abstract. *The advent of social media has radically changed the communication landscape. They enabled consumers to interact with other consumers online and exchange information. The information which consumers generate and share on social media is called user generated content (UGC). Today consumers rely heavily on UGC in their purchase decisions. The current study assesses the effects of quantity of posts, views and reviews (QPVR) on perceived credibility (PC) and usefulness (PU) of product content which users generate on YouTube. It also examines the effects of PC and PU on consumer attitudes toward UGC and their intentions of using it in their purchase decisions. Data was collected from 231 university students from Islamabad, Pakistan. The results reveal that QPVR has a positive effect on both PC and PU of the product content which users generate on YouTube. They also show that PC and PU have a positive effect on consumer attitudes toward product content which other users generate on YouTube. Findings of the current study have significant implications for social media advertisers.*

Keywords: quantity of posts, views and reviews, credibility, usefulness, user generated content, YouTube, attitudes, purchase intentions.

FACTORS AFFECTING CONSUMER ATTITUDES AND INTENTIONS TOWARD USER-GENERATED PRODUCT CONTENT ON YOUTUBE

Imran Anwar MIR
Iqra University
5 Khayaban-e-Johar, H-9 Islamabad, Pakistan
e-mail: Mr.Imran.Mir@gmail.com

Kashif Ur REHMAN
Iqra University
5 Khayaban-e-Johar, H-9 Islamabad, Pakistan
e-mail: drkashif@iqraisb.edu.pk

Management & Marketing
Challenges for the Knowledge Society
(2013) Vol. 8, No. 4, pp. 637-654

1. Introduction

Recent advancements in internet-based technologies have produced radical changes in the nature of the socio-business communication style, content and participants. The internet has opened new avenues for businesses to interact with their customers effectively (Ščeulovs and Gaile-Sarkane, 2010). Today, businesses use the internet to conduct their commercial activities globally (Durbhakula and Kim, 2011). Recently, social media has profoundly transformed the ways in which people communicate (Edwards, 2011). Social Media is a "group of internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of user generated content" (Kaplan and Haenlein, 2010, p. 61). In other words, social media is the personalized user generated media and users exercise greater control over its content generation and use than its producers of consumer goods and services (Dickey and Lewis, 2011). Social media is a broad term and consists of online networks (e.g. Facebook, MySpace, and LinkedIn), wikis (e.g. Wikipedia), multimedia sharing sites (e.g., YouTube and Flickr), bookmarking sites (e.g. Del.icio.us and Digg), virtual worlds (e.g. Second Life), rating sites (e.g. Yelp), blogs (e.g. TMZ), and virtual game worlds (e.g. World of Warcraft). The rapid growth and adoption of social media globally made it the focal point for business decision makers. Today, businesses are allocating their resources to identifying ways to make profitable use of social media (Kaplan and Haenlein, 2010). Since the inception of social media, several researchers (e.g. Cheong and Morrison, 2008; Chi, 2011; Cui et al., 2010; Daugherty et al., 2008; Mir, 2012; Mir and Zaheer, 2012; Sun et al., 2009; Zeng et al., 2009) attempted to assess the different aspects, uses and impacts of social media. Nevertheless, most of these past studies focused on social networking sites and virtual communities. So far, few studies have focused on YouTube which is a huge source of user generated content (UGC). YouTube is a multimedia sharing site where users can upload, share and view videos. They can also rate the YouTube content by giving it a thumb up or down or by publishing their comments (Snelson, 2011). Video dissemination through YouTube can have widespread impacts on opinions, thoughts, and cultures (Borghol et al., 2012) particularly when these videos are user generated. The popular user generated videos on YouTube shape the public opinion, attitude, and sentiments (Bachrach, 2008; Kiss, 2006). The user generated videos on YouTube can be about products, events, personalities and so on.

The current study focuses on UGC which contains information about products. Users trust UGC more than the producer generated content (PGC) (Cheong and Morrison, 2008; MacKinnon, 2012). Users/consumers trust UGC because other users are believed to share both their negative and positive product experiences in the spirit of full disclosure. Moreover, they are not perceived as having a commercial interest, which makes them seem unbiased judgers of a product's or service's qualities. On the other hand, producers usually communicate only the positive

attributes of their products to save their commercial interests (Cheong and Morrison, 2008), a fact well-known by consumers world-wide which has led to a wave of cynicism and scepticism (Helm, 2004). No doubt, users' impartiality makes the UGC more credible and useful than PGC. Besides this well-established fact, quantity of posts (number of videos about a product generated by users), their views and reviews (ratings) may affect the credibility and usefulness of UGC on YouTube. Ratings and recommendations by other users play an important role in assessing the credibility of the UGC on social media (Flanagin et al., 2011; Mir and Zaheer, 2012). The current study aims to examine the influence of quantity of posts, views, and reviews on the credibility and usefulness of product related content generated by users on YouTube. It also examines the influence of perceived credibility and usefulness on consumer attitudes toward product related content generated by users on YouTube (ATU) and their behavioural intentions (BI). This research is founded on Simonsen's (2011) methodological suggestion to analyse the utility of YouTube as a communication channel and browsing system from the users' side because most of the content on social media sites (e.g. on YouTube) is created by users and most of this content is used by end users.

2. Underlying theories and the proposed model

Prior to purchasing a product, consumers search for product information and recommendation so that a quality decision is made (Cheong and Morrison, 2008). Social media has made the consumers' information seeking process very convenient. Today, consumers log on to different social media sites to gather the information to support their purchase decisions. Consumers particularly rely on user-generated content in purchase decision making (Riegner, 2007; MacKinnon, 2012). One of the useful sources of user and producer generated content is YouTube (Kim et al., 2011). YouTube is a video sharing site where users upload videos to share with other users. The invention of YouTube augmented the online video viewing and production. It attracted huge number of audiences (Snelson, 2011). At the end of its first five years of service, YouTube was receiving more than 2 billion views per day (YouTube, 2010). Users were uploading more than 35 hours of videos per minute (Walk, 2010). Besides consumers, commercial and non-commercial organizations are using YouTube to communicate their messages. For instance, a lot of information about HPV vaccination and cervical cancer is available on YouTube (Ache and Wallace, 2008). Similarly, many travelling agencies are publishing tourism content on YouTube (Reino and Hay, 2011). Consumers use YouTube to share their experiences and views with other consumers in the form of videos. Since users/consumers play an active role in the production, distribution and receipt of YouTube's media content, (e.g. in video creating, sharing, and viewing), therefore, it is appropriate to examine the use of YouTube and its influence from an audience- perspective (Hanson and Haridakis, 2008).

The current study postulates that the quantity of posts, views, and reviews (QPVR) influences the perceived credibility (PC) and usefulness (PU) of product related content generated by users (UGC) on YouTube. It further postulates that perceived credibility (PC) and usefulness (PU) affect the consumer attitudes toward product related UGC available on YouTube (ATU). ATU is supposed to affect consumers' behavioural intentions (BI) of using product related UGC available on YouTube (See Figure 1). Several past theories partially support the postulations of the current study. For instance, the theory of social impact (Latane, 1981) supports the postulation that QPVR influences the perceived credibility (PC) and usefulness (PU) of product related content generated by users (UGC) on YouTube. Social impact theory states that "when other people are the source of impact and the individual is the target; impact should be a multiplicative function of the strength, immediacy, and number of other people" (Latane, 1981, p. 343). It assumes that as the number of social network members increases, the impact on the target individual increases. According to Latane (1981) actions and arguments of others not just influence an individual, but sometimes persuade him or her to act. Consistent with the social impact theory, Mir and Zaheer (2012) found that brand information on social media becomes more credible when multiple users express the same opinions about it in the form of comments, tags etc. Ratings and recommendations by other users help an individual user in assessing the credibility of the UGC on social media (Flanagin et al., 2011). Product information embedded in UGC becomes more credible and useful when multiple sources are supporting it (O'Reilly and Marx, 2011; Wunsch-Vincent, 2007).

In the original technology acceptance model (TAM), Davis (1986) suggested that the perceived usefulness affects attitudes. This supports the postulation that the perceived usefulness (PU) affects the consumer attitudes toward product related UGC available on YouTube (ATU). Similarly, perceived credibility has a positive influence on consumer attitudes toward user-generated content (Mir and Zaheer, 2012). The theory of reasoned action (Fishbein and Ajzen, 1975; Ajzen and Fishbein, 1980) and theory of planned behaviour (Ajzen, 1991) support the postulation that consumer attitudes toward product related UGC available on YouTube (ATUGC) affect their behavioural intentions (BI) of using it. The attitude construct in the theory of reasoned action (TRA) and the theory of planned behaviour (TPB) represents the attitude towards a particular behavior in a specific context (Ajzen 1991; Ajzen and Fishbein, 1980; Fishbein and Ajzen, 1975).

Figure 1 shows the overall relationship between the constructs of this study. The interplay between the constructs and the resulting hypotheses are discussed separately.

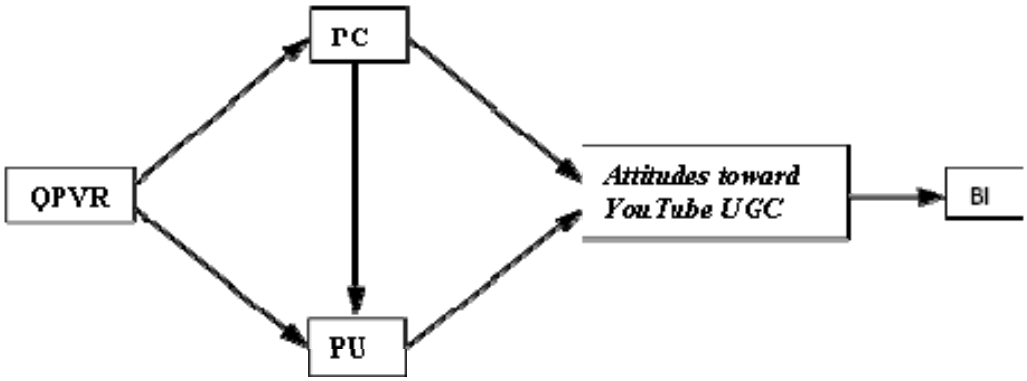

Figure 1. **Proposed attitudinal model of YouTube UGC**

2.1. Quantity of posts, views and reviews

When many users share the same information about a product on social media this augments the credibility and usefulness of that information (Mir and Zaheer, 2012). Liu-Thompkins and Rogerson (2012) stated that user ratings influence diffusion of the content more than its inherent quality. Most users who seek UGC on the web rely on the other users' tags and comments (Harris, 2012). Consumers (users) perceive the UGC sources (e.g., bloggers, video uploaders) as more credible than company generated content (Jonas, 2010). They also perceive UGC as a useful aid in purchase decision making (Cheong and Morrison, 2008). QPVR denotes the quantity of posts (number of videos about a product uploaded by multiple users on YouTube), views, and reviews (ratings and votes e.g. it's true, I like it) of those videos. Consumers often read the product reviews or threads on social media to make well-considered buying decisions (Muntinga et al., 2011). When multiple users upload their content (videos) about a product (e.g. mobile handset) on YouTube the perceived credibility and usefulness of that content improves. Similarly, when many users view and review that content, its perceived credibility and usefulness improves (Wunsch-Vincent, 2007). Once a user uploads the video on YouTube it may have numerous comments, ratings, favourites and subscriptions by other users (Han et al., 2009). When various viewers rank a video through likes and votes, it becomes popular. This popularity attracts more users to watch that video. It ultimately leads to the perceived credibility and usefulness of that video (Cha et al., 2007; Gill et al., 2007; Han et al., 2009).

H1. Quantity of posts, views and reviews has a positive effect on the perceived credibility of user generated YouTube product related content.

H2. Quantity of posts, views and reviews has a positive effect on the perceived usefulness of user generated YouTube product related content.

2.2. Perceived credibility

The credibility of a message depends on the recipient's perception of its source (Erdogan, 1999). Assessing the credibility of the message source is important. High credibility of the message source has a positive effect on consumer attitudes toward the brand (Erdogan, 1999; Friedman and Friedman, 1979; Ohanian, 1990). Various factors affect the credibility of the message. For example, message medium, expertise, knowledge and credibility of the source. Internet users perceive the same information on the web more credible than on traditional media (e.g. in newspapers) (Wathen and Burkell, 2002).

Credibility can be "defined as believability. Credible people are believable people. Similarly, credible information is believable information." (Tseng and Fogg, 1999, p. 39) Perceived credibility is defined as the extent to which a user feels the certainty and pleasant outcomes of using an electronic application service (Jacoby and Kaplan, 1972). Users hold more positive perceptions about user generated product messages on social media than advertisements (Parise and Guinan, 2008). UGC is considered to be unbiased in comparison to producer generated content (i.e. ads). Most importantly, the content which users generate on social media is based on their personal product experiences (Cheong and Morrison, 2008). Perceptions about the source credibility influence message evaluation, attitudes and behavioural intentions (Ohanian, 1991).

The current study postulates that the perceived credibility of user generated product content on YouTube has a positive effect on consumer attitudes toward such content (see Figure 1). Source credibility significantly affects the user's attitudes toward the message (Zernigah and Sohail, 2012). Mir and Zaheer (2012) found that perceived credibility has a positive effect on consumer attitudes toward user-generated content (UGC).

The current study also postulates that perceived credibility of UGC has a positive effect on its perceived usefulness (see Figure 1). Consumers perceive online product information credible and useful in purchase decision making (Cheung et al., 2008). McKnight and Kacmar (2007) found that perceived credibility influences the perceived usefulness of the information on the web positively. Yet, there are some studies which contradict the findings of McKnight and Kacmar (2007). For example, Hilligoss and Rieh (2008) stated that a person may perceive the information on web as credible, but not useful.

H3. Perceived credibility of user generated product content on YouTube has a positive effect on user attitudes toward it.

H4. Perceived credibility influences perceived usefulness of user generated product content on YouTube positively.

2.3. Perceived usefulness

Consumers usually seek out other consumers' comments, views and recommendations on the web to lessen the risks involved in a purchase (Goldsmith and Horowitz, 2006). Today consumers use social media (e.g. social network sites, blogs, YouTube) to find user generated product information to support their purchase decisions. Consumers perceive user generated product information on YouTube useful. Users generate and share useful information on social media (e.g. on YouTube) based on their personal product experiences. Users are believed to share both negative and positive product experiences which make UGC not only credible, but also useful (Cheong and Morrison, 2008). David (1989, p. 320) defined perceived usefulness as "the degree to which a person believes that using a particular system would enhance his or her job performance. This follows from the definition of the word useful: capable of being used advantageously". UGC on YouTube is a convenient source of product information. Within a few seconds, an individual can get access to the different categories of UGC on YouTube (Simonsen, 2011). UGC contains diversified input from different users, which may be valuable for other users (Cook, 2008). The current study postulates that perceived usefulness has a positive effect on consumer attitudes toward the user generated product content on YouTube (See Figure 1). Perceived usefulness of UGC is proposed to have positive effects on consumer attitudes because usefulness of information benefits the consumer (Zeng et al., 2009).

H5. Perceived usefulness of user generated product content on YouTube has a positive effect on user attitudes toward it.

2.4. Attitude and behavioural intentions

Understanding consumers' attitude is important because it affects their behavioural intentions (Kraft et al., 2005). Attitude is defined as an individual's favourable or unfavourable feelings and evaluations about performing a particular behaviour (Fishbein and Ajzen, 1975). "Intentions are assumed to capture the motivational factors that influence a behaviour; they are indications of how hard people are willing to try, of how much of an effort they are planning to exert, in order to perform the behaviour" (Ajzen, 1991, p. 181). Positive attitudes affect an individual's behavioural intentions positively (Mosavi and Ghaedi, 2012). The current study proposes that consumer attitudes toward UGC on YouTube and their behavioural intentions of using that UGC in purchase decision making are associated positively (see Figure 1). Consumers' positive attitudes toward online user generated content enhance their intentions to consume such content (Daugherty et al., 2008).

H6. Positive user attitudes toward the product content generated by other users on YouTube have a positive effect on their intentions of using it in purchase decision making.

3. Research methodology

Data was collected from a sample of 231 university students at Islamabad (the capital of Pakistan). Samples were drawn using convenience sampling procedure and an offline self-administrative questionnaire was distributed to each respondent. To give a brief description of the resulting sample we can state that 61% of the respondents were male and 39% female, 7.4% were under 20 years of age, 63.8% had between 20 and 29 years, 24.8%, were between the age of 30 and 39, and 4% were 39 or above. 54.3% students were enrolled in undergraduate degree programs, while 45.7% were enrolled in graduate degree programs.

To measure the constructs, we adapted several items from previous studies. To measure QPVR, two items were adapted from Bailey (2005) and two items from Jones et al. (1986). To measure the perceived credibility (PC) nine items were adapted from Chi (2011). To measure perceived usefulness (PU) three items were adapted from Chi (2011) and three items from Patwardhan and Ramaprasad (2005). To measure consumer attitudes toward product related UGC on YouTube (ATU) two items were adapted from Liu et al. (2009) and four items were adapted from Lai and Chang (2011). To measure the BI, two items were adapted from Liu et al. (2009). Responses were measured on a seven-point Likert scale ranging from one ("Strongly Disagree") to seven ("Strongly Agree").

Principal component analysis (PCA) with Varimax rotation was conducted to screen the items and check their validity. PCA was run on 4-items of QPVR, 9-items of PC, 6-items of PU and 6-items of ATU. On the first iteration, PCA extracted only one factor of QPVR validating all the 4-items. The PCA values of QPVR are eigen value = 2.120, percentage of variance = 53.009, KMO= 0.734, Bartlett's test of sphericity = 0.000 ($p < 0.05$) and Cronbach's alpha = 0.704. Table 1 shows the factor loadings of QPVR. At the first iteration, PCA produced two components of PC with some low loading items. The third iteration, after deleting 4 invalid items, produced one component. This component consisted of 5 items. The PCA values of PC are eigen value = 2.515, percentage of variance = 50.296, KMO = 0.789, Bartlett's test of sphericity = 0.000 ($p < 0.05$) and Cronbach's alpha = 0.748. Table 1 shows the factor loadings of PC. PCA extracted only one factor of PU. PCA validated all the 6-items of PU. The PCA values of PU are eigen value = 3.065, percentage of variance = 51.075, KMO = 0.762, Bartlett's test of sphericity = 0.000 ($p < 0.05$) and Cronbach's alpha = 0.806. Table 1 shows the factor loadings of PU. PCA extracted only one component of ATU. However, only 4-items were chose and 2-items were deleted as their initial extraction values were very low. The PCA values of ATU are eigen value = 2.184, percentage of variance = 54.599, KMO = 0.703, Bartlett's test of sphericity = 0.000 ($p < 0.05$) and Cronbach's alpha = 0.742. Table 1 shows the factor loadings of ATU. Due to the least number of items (i.e. 2) only reliability of BI was examined. Guttman Split-Half Coefficient was used to test the reliability of BI. Guttman Split-Half Coefficient of BI was 0.700.

Table 1

Measurement scales of constructs of the study

Constructs	Measures	Loading
QPVR	Q1. I often review the product content generated by multiple users on YouTube.	.729
	Q2. I usually feel confident in user generated product content on YouTube when a group of users vote it positively.	.757
	Q3. I find the user generated product content on YouTube stimulating especially when multiple users create it.	.744
	Q4. I trust the user generated product content on YouTube when multiple users rate it positively.	.679
PC	C1. User generated product content on YouTube is unbiased.	.658
	C2. User generated product content on YouTube is dependable.	.660
	C3. User generated product content on YouTube is honest.	.783
	C4. User generated product content on YouTube is reliable.	.611
	C5. User generated product content on YouTube is truthful	.812
PU	U1. User generated product content on YouTube is good.	.724
	U2. User generated product content on YouTube is valuable.	.678
	U3. User generated product content on YouTube is a convenient source of product information.	.880
	U4. User generated product content on YouTube is useful.	.504
	U5. Users supply relevant product information on YouTube.	.717
	U6. User generated product content on YouTube makes product information immediately accessible.	.734
ATU	A1. Watching user generated YouTube content enables me to get the reliable product information.	.774
	A2. Watching user generated YouTube content enables me to get useful product information.	.820
	A3. Watching user generated YouTube content enables me to know the different product aspects.	.773
	A4. Watching user generated YouTube content enables me to get rich product information.	.561
BI	BI1. I will try the products shown on YouTube.	*
	BI2. I intend to consider the products shown on YouTube in my future purchases.	*

Note: *PCA was not applied on BI.

A confirmatory factor analysis (CFA) was performed to assess the goodness of fit of the measurement models of QPVR, PC, PU and ATU. Amos version 18 was used for the structural equation modelling (SEM) analysis. Traditional cut-off criteria of model fit (see Bentler, 1983:1990; Browne and Cudeck, 1993; Marsh and Grayson, 1995; McDonald and Ho, 2002; Schumacker and Lomax, 1996) was used to assess the goodness of fit of measurement models of QPVR, PC, PU and ATU. Measurement models of QPVR, PC, PU and ATU showed a good fit to data (see Table 2). Minimum standardized path coefficients should be 0.20 and above 0.30 is considered ideal to accept the relationship between the variables (Chin, 1998). Figure 2 shows the CFA item loadings of the constructs of this study.

Table 2

Goodness of fit of the measurement models

Construct	χ2	d.f.	P	χ2/d.f	GFI	IFI	CFI	NFI	TLI	RMSEA
QPVR	1.890	2	.389	.945	.996	1.00	1.00	.985	1.00	.000
PC	13.740	5	.017	2.748	.977	.958	.957	.935	.914	.033
PU	25.575	9	.002	2.842	.964	.955	.954	.932	.923	.050
ATU	8.765	2	.012	4.383	.982	.965	.964	.955	.900	.048
Criteria			> .05	< 5	> .90	> .90	> .90	> .90	> .90	< .08

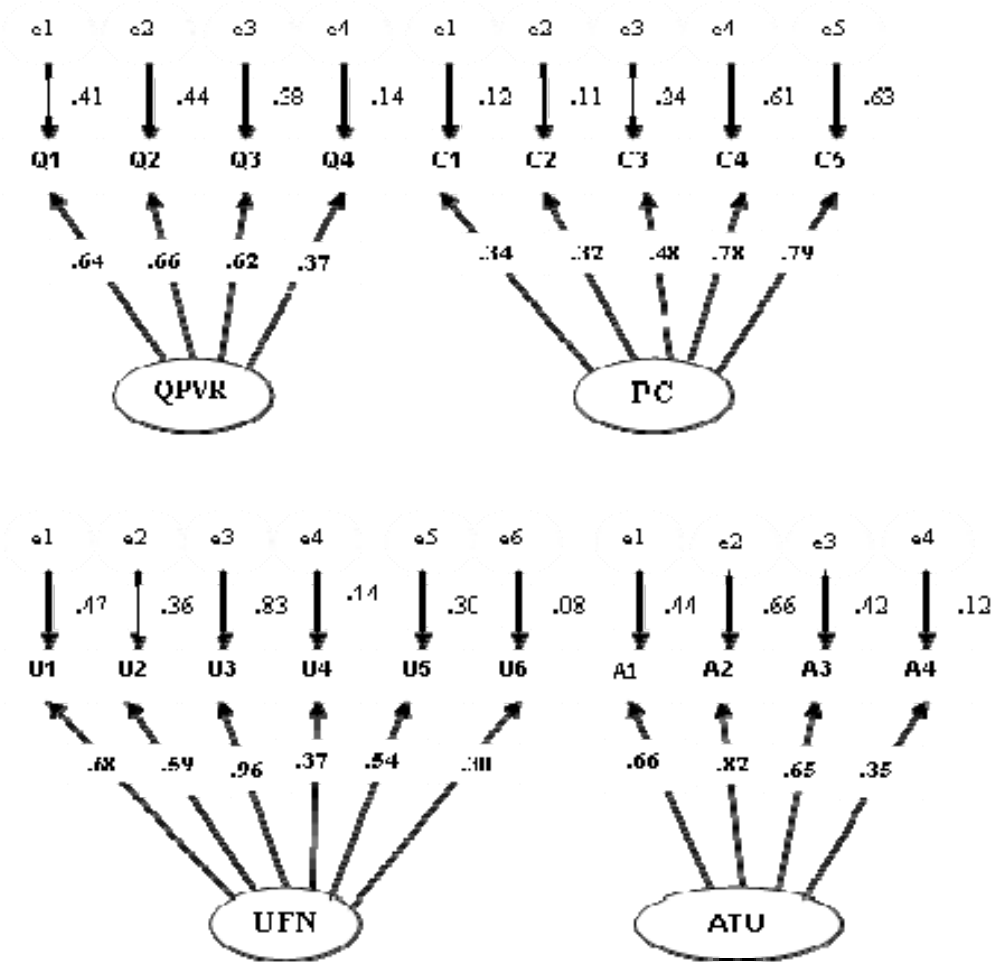

Figure 2. **CFA item loadings of measurement models**

5. Theory testing

5.1. Model fit

The model provides a good fit to the data with a Chi-square ($\chi 2$) = 1.286, *df* = 4, p > **0**.05. The $\chi 2/df$ ratio = **0**.322 is also satisfactory. $\chi 2/df$ ratio less than 5 is considered sufficient to accept the model (Thomson et al., 2005). Besides $\chi 2$ and $\chi 2/df$ ratio, six indices, Goodness of Fit Index (GFI), Incremental Fit Index (IFI), Comparative Fit Index (CFI), Normed Fit Index (NFI), Tucker-Lewis Index (TLI), and Root Mean Square Error of Approximation (RMSEA) were used to examine the model fit. The model shows excellent fit to data on these indices by exceeding the proposed goodness-fit values of traditional cut-off model fit criteria (see Bentler, 1983:1990; Browne and Cudeck, 1993; Marsh and Grayson, 1995; McDonald and Ho, 2002; Schumacker and Lomax, 1996) (See Table 3).

Table 3

Structural model fit

Construct	χ2	d.f.	P	χ2/d.f	GFI	IFI	CFI	NFI	TLI	RMSEA
Model values	1.286	4	.864	.322	.998	1.000	1.000	.987	1.000	.000
Cut of Criteria			> .05	< 5	> .90	> .90	> .90	> .90	> .90	< .08

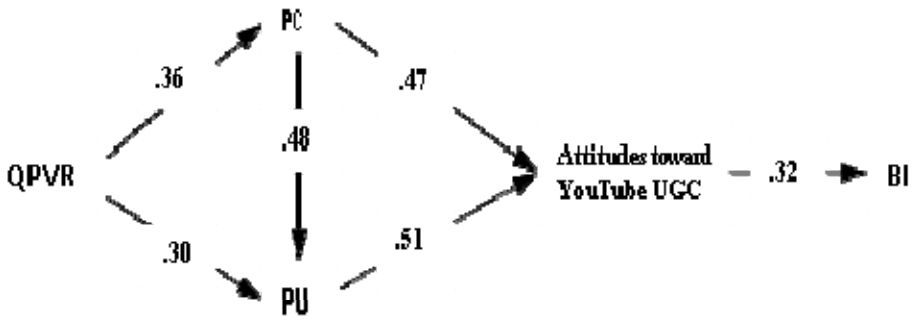

Figure 3. **Structural model**

5.2. Structural model and hypotheses testing

The proposed structural model tested in the current study consists of six causal paths (see Figure 3 and Table 4). The minimal value of standardized path coefficient (β) should be 0.20 and above 0.30 is ideal to accept the relationship between the two variables (Chin, 1998). In the proposed model, all the six paths are statistically significant (Table 4). Causal path between QPVR and PC has β = 0.36 and p < 0.001. These results support the hypothesis (H1) that quantity of posts, views and reviews has a positive effect

on the perceived credibility of user generated YouTube product related content. Similarly, causal path between QPVR and PU has $\beta = 0.48$ and $p < 0.01$. These results support the hypothesis (H2) that quantity of posts, views and reviews has a positive effect on the perceived usefulness of user generated YouTube product related content. Causal path between PC and ATU has $\beta = 0.36$ and $p < 0.001$. These results support the hypothesis (H3) that perceived credibility of user generated product content on YouTube has a positive effect on user attitudes toward it. Causal path between PC and PU has $\beta = 0.47$ and $p < 0.01$. These results support the hypothesis (H4) that perceived credibility influences perceived usefulness of user generated product content on YouTube positively. Causal path between PU and ATU has $\beta = 0.51$ and $p < 0.001$. These results support the hypothesis (H5) that perceived usefulness of user generated product content on YouTube has a positive effect on user attitudes toward it. Causal path between ATU and BI has $\beta = 0.32$ and $p < 0.01$. These results support the hypothesis (H6) that positive user attitudes toward the product content generated by other users on YouTube have a positive effect on their intentions of using it in purchase decision making.

Table 4

Standardized path coefficients and hypotheses testing

Hypotheses	Causal Path	Standardized Path (β)	P	Remarks
H1	QPVR→ PC	.36	***	Supported
H2	QPVR→PU	.30	**	Supported
H3	PC→PU	.48	***	Supported
H4	PC→ ATU	.47	***	Supported
H5	PU→ ATU	.51	***	Supported
H6	ATU→BI	.32	**	Supported

Note: *P < .05, **P < .01, ***P < .001.

6. Discussion

In the last two decades enormous changes took place in the ways of social and business communication. Undoubtedly, the internet has played the role of a catalyst in this change. Recently, social media profoundly transformed the communication landscape and this transformation still continues (Edwards, 2011). Social media is user generated media and most of the content available on it is user generated (UGC). Users usually generate verbal, visual and multimedia content on different platforms of social media (e.g. on YouTube) (Cheong and Morrison, 2008). The current study focused on the product related content which internet users generate on YouTube. Consumers perceive UGC as more credible and useful than the producer generated product information. UGC is considered to be objective and unbiased. Today, many consumers prefer to make purchase decisions based on the comments and recommendations which other consumers post on social media (Harris and Rae, 2009). The current study aimed to assess the influence of quantity of posts, views, and reviews (QPVR) on the perceived credibility (PC) and usefulness (PU) of product related content which users generate (UGC) on YouTube. It also aimed to examine

the influence of perceived credibility and usefulness on consumer attitudes toward product related content which other users generate on YouTube (ATU). In addition, it attempted to assess the association between consumer attitudes toward user generated YouTube product content and their intentions to use that content in purchase decision making (BI).

Consistent with past studies (e.g. Wunsch-Vincent, 2007) the current study found that the quantity of posts, views, and reviews has a positive effect on the perceived credibility and usefulness of the product content which users generate on YouTube. Wunsch-Vincent (2007) identified that the numbers of posts, views, and reviews affect the perceived credibility and usefulness of the product information, which users upload on YouTube. Once a user uploads the video on YouTube it may have numerous comments, ratings, favourites and subscriptions by other users. These comments, ratings, and subscriptions enhance the perceived credibility and usefulness of the UGC on YouTube (Han et al., 2009). Posts, ratings, tags, and comments influence the diffusion and use of UGC (Liu-Thompkins and Rogerson, 2012; Harris, 2012). Popular user generated videos on YouTube that are viewed and reviewed by numerous people shape the public opinion, attitude, and sentiments (Bachrach, 2008; Kiss, 2006).

The current study found that perceived credibility positively influences the user attitudes toward product content which other users generate on YouTube. The message sources that consumers perceive more credible have strongly positive effect on their attitudes toward the message (Friedman and Friedman, 1979; Ohanian, 1990). Consumers perceive UGC sources (e.g. bloggers, video up-loaders etc.) as more credible than social media advertisers and possess positive attitudes toward UGC (Jonas, 2010). The current study also found that perceived credibility has a positive effect on the perceived usefulness of the product content which other users generate on YouTube. Some past studies conducted in web context support this finding. For example, McKnight and Kacmar (2007) found that information credibility influences the perceived usefulness of the information on the web positively. Consumers perceive online comments and product reviews credible as well as useful aids in purchase decisions (Cheung et al., 2008).

Daugherty et al. (2008) stated that perceived value of the content affect the consumer attitudes toward it. The current study identified that perceived usefulness positively affects the consumer attitudes toward the product content which other users generate on YouTube. Goldsmith and Horowitz (2006) identified that consumers perceive other consumers' online product reviews and comments useful and risk reducers in purchase decision making situations. Generally it is believed that consumers share both positive and negative product experiences with other consumers on social media. Conversely, product producers are perceived to advertise only the positive aspects of their products on social media. This perception has a positive effect on the consumers' perceived usefulness of the content which other users generate on YouTube (Cheong and Morrison, 2008). Attitude significantly influences the behavioural intentions (Kraft et al., 2005; Mosavi and Ghaedi, 2012). The current study found that consumer attitudes toward the product related UGC on YouTube and their intentions of using it in purchase decisions are associated positively. Consumers' positive attitude toward the UGC leads to the consumption of UGC (Daugherty et al., 2008).

7. Conclusions and implications for business

The advent of social media has profoundly reshaped the communication landscape. It has significantly changed the relationship between the product producer and product user. Today, consumers rely more on the product recommendations and information which other users generate on social media (e.g. on YouTube) than the product advertisements. The current study examined the influence of the quantity of posts, views, and reviews on the perceived credibility and usefulness of the product content, which users generate on YouTube. Results revealed that the quantity of posts, views, and reviews has a positive effect on consumers' perceived credibility and usefulness of product content which other users generate on YouTube. In addition, results showed that both perceived credibility and usefulness positively influence consumer attitudes toward the product content which other users generate on YouTube. Results also revealed that consumer attitudes toward the content which other users generate on YouTube and their intentions to use that content in purchase decisions are associated positively.

The current study treated quantity of posts, views, and reviews about products on YouTube as a single construct. Future studies should treat quantity of posts, views and review as separate variables. Future studies should also examine the impact of advertising messages embedded in user generated YouTube content on consumer attitudes and behavioural intentions.

The findings of the current study have some important implications for those businesses which advertise their products and services using social media (e.g. YouTube). These findings suggest that advertisers should sponsor social media users to promote their products. Users who generate product content or information on social media are viewed as opinion leaders by other users (Cheong and Morrison, 2008). These findings also suggest that social media advertisers should embed their advertising messages in user generated YouTube videos with the permission of the video uploader. This will expose more users to the advertiser's message. This is justified by the fact that young consumers perceive UGC publishers (e.g. bloggers, video up-loaders) as credible and like to watch user generated videos on YouTube (Jonas, 2010). Furthermore, findings of the current study imply that advertisers should use real product users in their social media ads instead of celebrities. Consumer endorsements enhance perceived credibility of the endorsed product. It enhances the audience's attitudes toward the endorsed product (Wang, 2005).

References

Ache, K.A. and Wallace, L. S. (2008), "Human papilloma virus vaccination coverage on YouTube", *American Journal of Preventive Medicine*, Vol. 35, pp. 389-392

Ajzen, I. (1991), "The theory of planned behaviour", *Organizational Behaviour and Human Decision Processes*, Vol. 50, pp. 179-211

Ajzen, I. and Fishbein, M. (1980), *Understanding attitudes and predicting social behaviour*, Prentice-Hall, Englewood Cliffs, New Jersey

Bachrach, J. (2008), "The 'Low–Tech' election year: Viral videos shape a new politics", *Science & Spirit*, (January/February), pp. 16-17

Bailey, A.A. (2005), "Consumer awareness and use of product review websites", *Journal of Interactive Advertising*, Vol. 6, No. 1, pp. 68-81

Bentler, P.M. (1983), "Some contributions to efficient statistics in structural models: Specification and estimation of moment structures" *Psychometrika*, Vol. 48, No. 4, pp. 493-517

Bentler, P.M. (1990), "Comparative fit indexes in structural models", *Psychological Bulletin*, Vol. 107, No. 2, pp. 238-246

Borghol, Y., Ardon, S., Carlsson, N., Eager, D. and Mahanti, A. (2012), "The untold story of the clones: Content-agnostic factors that impact YouTube video popularity", in: *Proceedings of 18th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD*), ACM. Beijing, China, August 12-16

Browne, M.W. and Cudeck, R. (1993), "Alternative ways of assessing model fit", in: Bollen, K. and Long, J.S. (eds.) *Testing structural equation models*, pp. 136-162, Sage Publications, Newbury Park

Cha, M., Kwak, H., Rodriguez, P., Ahn, Y-Y. and Moon, S. (2007), "I tube, you tube, everybody tubes: Analysing the world's largest user generated content video system", in: *Proceedings of 7th ACM SIGCOMM Conference on Internet Measurement*, ACM, San Diego, California, USA, October 24-26

Cheong, H.J. and Morrison, M.A. (2008), "Consumers' reliance on product information and recommendations found in UGC", *Journal of Interactive Advertising*, Vol. 8, No. 2, pp. 38-49

Cheung, C.M.K., Lee, M.K.O. and Rabjohn, N. (2008), "The impact of electronic word-of-mouth: The adoption of online opinions in online customer communities", *Internet Research*, Vol. 18, No. 3, pp. 229-247

Chi, H-H. (2011), "Interactive digital advertising vs. virtual brand community: exploratory study of user motivation and social media marketing responses in Taiwan", *Journal of Interactive Advertising*, Vol. 12, No. 1, pp. 44-61

Chin, W.W. (1998), "Issues and opinion on structural equation modelling", *MIS Quarterly*, Vol. 22, No. 1, pp. 7-16

Cook, S. (2008), "The contribution revolution", *Harvard Business Review*, Vol. 86, No. 10, pp. 60-69

Cui, N., Wang, T. and Xu, S. (2010), "The influence of social presence on consumers' perceptions of the interactivity of web sites", *Journal of Interactive Advertising*, Vol. 11, No. 1, pp. 36-49

Daugherty, T., Eastin, M.S. and Bright, L. (2008), "Exploring consumer motivations for creating user-generated content", *Journal of Interactive Advertising*, Vol. 8, No. 2, pp. 16-55

Davis, F.D. (1986), *A technology acceptance model for empirically testing new end-user information systems: Theory and results*, Doctoral dissertation, MIT Sloan School of Management, Massachusetts Institute of Technology

Davis, F.D. (1989), "Perceived usefulness, perceived ease of use, and user acceptance of information technology", *MIS Quarterly*, Vol. 13, No. 3, pp. 319-340

Dickey, I.J. and Lewis, W.F. (2011), "An Overview of Digital Media and Advertising", in: Eastin, M. S., Daugherty, T. and Burns, N. M. (eds.) *Digital media and advertising: User generated content consumption*, Information Science Reference, pp. 1-31, New York

Durbhakula, V.V.K, and Kim, D.J. (2011), "E-business for nations: A study of national level e-business adoption factors using country characteristics-business-technology-government framework", *Journal of Theoretical and Applied Electronic Commerce Research*, Vol. 6, No. 3, pp. 1-12

Edwards, S. M. (2011), "A social media mindset", *Journal of Interactive Advertising*, Vol. 12, No. 1, pp. 1-3

Erdogan, Z.B. (1999), "Celebrity endorsement: A literature review", *Journal of Marketing Management*, Vol. 15, No. 3, pp. 291-314

Fishbein, M. and Ajzen, I. (1975), *Belief, attitude, intention and behavior: An introduction to theory and research*, Reading, MA, Addison-Wesley

Flanagin, A.J., Metzger, M.J., Pure, R. and Markov, A. (2011), "User-generated ratings and the evaluation of credibility and product quality in ecommerce transactions", In: *Proceedings of the 44th International Conference on System Sciences,* IEEE, Hawaii, January 4-7

Friedman, H.H. and Friedman, L. (1979), "Endorser effectiveness by product type", *Journal of Advertising Research*, Vol.19, pp. 63-71

Gill, P., Arlitt, M., Li, Z. and Mahanti, A. (2007), "YouTube traffic characterization: A view from the edge", In: *Proceedings of 7th ACM SIGCOMM Conference on internet measurement*, pp. 15-28, ACM, New York

Goldsmith, R. and D. Horowitz, D. (2006), "Measuring motivations for online opinion seeking", *Journal of Interactive Advertising*, Vol. 6, No. 2, pp. 1-16

Han, Y-S., Kim, L. and Cha, J.-W. (2009), "Evaluation of user reputation on YouTube", In: Ozok, A.A. and Zaphiris, P. (eds.) *Lecture notes in computer science*, Vol. 5621, pp. 346-353, Online Communities and Social Computing. Springer-Verlag, Berlin

Hanson, G. and Haridakis, P. (2008), "YouTube users watching and sharing the news: a uses and gratifications approach", *Journal of Electronic Publishing*, Vol. 11, No. 3

Harris, C.G. (2012), "An Evaluation of Search Strategies for User-Generated Video Content", In: *Proceedings of First International WWW Workshop on Crowdsourcing Web Search,* Lyon, France, April

Harris, L. and Rae, A. (2009), "Social networks: the future of marketing for small business", *Journal of Business Strategy*, Vol. 30, No. 5, pp. 24-31

Hilligoss, B. and Rieh, S-Y. (2008), "Developing a unifying framework of credibility assessment: Construct, heuristics, and interaction in context", *Information Processing and Management*, Vol. 44, pp. 1467-1484

Jacoby, J. and Kaplan, L.B. (1972), "The components of perceived risk", in: *Proceedings of the 3rd Annual Conference of the Association for Consumer Research*, pp. 382-393. Association for Consumer Research, Chicago, IL

Jonas, J.R.O. (2010), "Source credibility of company-produced and user generated content on the internet: An exploratory study on the Filipino youth", *Philippine Management Review*, Vol. 17, pp. 121-132

Jones, W.H., Briggs, S.R. and Smith, T.G. (1986), "Shyness: Conceptualization and Measurement", *Journal of Personality and Social Psychology*, Vol. 51, No. 3, pp. 629-639

Kaplan, A.M. and Haenlein, M. (2010), "Users of the world, unite! The challenges and opportunities of Social Media", *Business Horizons*, Vol. 53, 59-68

Kim, K-S., Yoo-Lee, E. Y. and Sin, S-C.J. (2011), "Social media as information source: Undergraduates' use and evaluation behaviour", In: *Proceedings of ASIS&T 2011 Annual Meeting*, ASIST, New Orleans, LA, USA, October 9-13

Kiss, J. (2006), "Media: Go figure viral videos: Spread of online movie clips shows YouTube's influence," *Guardian,* Vol. 18, December, p. 9

Kraft, P., Rise, J., Sutton, S. and Røysamb, E. (2005), "Perceived difficulty in the theory of planned behaviour: perceived behavioural control or affective attitude", *British Journal of Social Psychology*, Vol. 44, pp. 479-96

Lai, J-Y., and Chang, C.Y. (2011), "User attitudes toward dedicated e-book readers for reading. The effects of convenience, compatibility and media richness", *Online Information Review*, Vol. 35, No. 4, pp. 558-580

Latane, B. (1981), "The psychology of social impact", *American Psychologist*, Vol. 36, No. 4, pp. 343-356

Liu, S-H., Liao, H-L. and Pratt, J.A. (2009), "Impact of media richness and flow on e-learning technology acceptance", *Computers & Education*, Vol. 52, pp. 599-607

Liu-Thompkins, Y. and Rogerson, M. (2012), "Rising to stardom: An empirical investigation of the diffusion of user-generated content", *Journal of Interactive Marketing*, Vol. 26, pp. 71-82

Marsh, H.W. and Grayson, D. (1995), "Latent variable models of multi-trait-multi-method data", in: Hoyle, R. (ed.) *Structural equation modeling: Concepts, issues and applications*, pp. 177-198, Sage, Thousand Oaks, CA

McDonald, R.P. and Ho, M.H.R. (2002), "Principles and practice in reporting structural equation analyses", *Psychological Methods*, Vol. 7, No. 1, pp. 64-82

MacKinnon, K.A. (2012), "User generated content vs. advertising: Do consumers trust the word of others over advertisers", *The Elon Journal of Undergraduate Research in Communications*, Vol. 3, No. 1, pp. 14-22

McKnight, D.H. and Kacmar, C.J. (2007), "Factors and effects of information credibility", In: *Proceedings of the ninth international conference on Electronic commerce*, pp. 423-432, ACM, New York, NY, USA

Mir, I. and Zaheer, A. (2012), "Verification of social impact theory claims in social media context", *Journal of Internet Banking and Commerce*, Vol. 17, No. 1, pp. 1-15

Mir, I.A. (2012), "Consumer attitudinal insights about social media advertising: A South Asian perspective", *The Romanian Economic Journal*, Vol. XV, No. 45, pp. 265-288

Mosavi, S.A. and Ghaedi, M. (2012), "An examination of the effects of some factors on behavioral intentions (A new model)", *Global Advanced Research Journal of Management and Business Studies*, Vol. 1, No. 5, pp. 163-172

Muntinga, D.G., Moorman, M. and Smit, E.G. (2011), "Introducing COBRAs: Exploring motivations for brand-related social media use", *International Journal of Advertising*, Vol. 30, No. 1, pp. 13-46

Ohanian, R. (1990), "Construction and validation of a scale to measure celebrity endorsers' perceived expertise, trustworthiness, and attractiveness", *Journal of Advertising*, Vol. 19, No. 3, pp. 39-52

O'Reilly, K. and Marx, S. (2011), "How young, technical consumers assess online WOM credibility", *Qualitative Market Research: An International Journal*, Vol. 14, No. 4, pp. 330-359

Parise, S. and P.J. Guinan (2008), "Marketing using web 2.0", in: *Proceedings of International Conference on System Sciences*, IEEE, Hawaii, IEEE, January 07-10

Patwardhan, P. and Ramaprasad, J. (2005), "Rational integrative model of online consumer decision making", *Journal of Interactive Advertising*, Vol. 6, No. 1, pp. 2-13

Reino, S. and Hay, B. (2011), "The Use of YouTube as a Tourism Marketing Tool", In: *Proceedings of the 42nd Annual Travel & Tourism Research Association Conference*, London, Ontario, Canada, 42

Riegner, C. (2007), "Word of mouth on the web: The impact of web 2.0 on consumer purchase decisions", *Journal of Advertising Research*, December, Vol. 47, No. 4, pp. 436-437

Ščeulovs, D. and Gaile-Sarkane, E. (2010), "Identification of factors affecting consumer habits in the e-environment", in: *Proceedings of 6th International Scientific Conference,* Vilnius Gediminas Technical University Publishing House "Technika, Vilnius, Lithuania, May 13-14

Schumacker, R.E., and Lomax, R.G. (1996), *A beginner's guide to structural equation modelling*, Lawrence Erlbaum Associates, Mahwah, New Jersey

Simonsen, T.M. (2011), "Categorising YouTube. *Journal of media and communication research*", Vol. 27, No. 51, pp. 72-93

Snelson, C. (2011), "YouTube across the disciplines: A review of the literature", MERLOT Journal of Online Learning and Teaching, Vol. 7, No. 1, pp. 159-169

Sun, S-Y., Ju, T.L., Chumg, H-F., Wu, C-Y. and Chao, P-J. (2009), "Influence on willingness of virtual community's knowledge sharing: Based on social capital theory and habitual domain", *World Academy of Science, Engineering and Technology*, Vol. 53, pp. 142-149

Thomson, M., MacInnis, D. J. and Park, C. W. (2005), "The ties that bind: Measuring the strength of consumers' emotional attachments to brands", *Journal Of Consumer Psychology*, Vol. 15, No. 1, pp. 77-91

Tseng, S., and Fogg, B.J. (1999), "Credibility and computing technology", *Communications of the ACM*, Vol. 42, No. 5, pp. 39-44

YouTube (2010), "At five years, two billion views per day and counting", The Official YouTube Blog [Online] Available at: http://youtube-global.blogspot.com/2010/05/at-five-years-two-billion-views-per-day.html (Accesed June 13, 2013)

Wang, A. (2005), "The effects of expert and consumer endorsements on audience response", Journal *of Advertising Research*, Vol. 45, No. 4, pp. 402-412

Walk, H. (2010), "Great Scott! Over 35 hours of video uploaded to YouTube every minute", The Official YouTube Blog [Online] Available at: http://youtube lobal.blogspot.com/ 2010/11/great-scott-over-35-hours-of-video.html (Accesed September 18, 2013)

Wathen, N.C., and Burkell, J. (2002), "Believe it or not: Factors influencing credibility on the web", *Journal of the American Society for Information Science and Technology*, Vol. 53, No. (2), pp. 134 -144

Wunsch-Vincent, S. (2007), *Participative web and user-created content: Web 2.0, wikis and social networking*, OECD

Zeng, F., Huang, L. and Dou, W. (2009), "Social factors in user perceptions and responses to advertising in online social networking communities", *Journal of Interactive Advertising*, Vol. 10, No. 1, pp. 1-13

Zernigah, K.I. and Sohail, K. (2012), "Consumers' attitude towards viral marketing in Pakistan", *Management & Marketing: Challenges for the Knowledge Society*, Vol. 7, No. 4, pp. 645-662

About the authors

Imran Anwar MIR is a PhD scholar at Management Sciences Iqra University Islamabad Pakistan. His research interests are in the areas of consumer behaviour, advertising, sales promotions, new product development, counterfeiting and social media. He has more than 18 papers published in international journals.

Kashif Ur REHMAN earned Doctorate degree in Business Administration from Philippines School of Business Administration Manila in 1997. He is a Professor and Director Research at Iqra University. He has more than 100 research papers published in national and international journals. He has also authored five books.