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Insights into Motivation to Participate in Online Surveys

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ABSTRACT: *More marketing research is being conducted using online surveys. Response rate is an issue because of the importance of these data for business decision-making. This study uses a sample of 1,501 from an existing opt-in online survey research panel to gain insight into the motivations to participate in online research, and to identify the right participation incentives. The findings suggest that respondents are motivated by their perceived level of expertise to offer relevant information, familiarity with and trust toward the sponsors of the survey, the propensity for sharing and participation in social media, sponsors' valuing their opinions through feedback, and sponsors' addressing privacy concerns appropriately. Further, the study segments responses by their type and frequency of social media use. Those with high participation and high information needs are motivated by all of the factors identified. In contrast, those who mostly socialize on social media are motivated by familiarity with sponsors, the opportunity to share online, and having privacy expectations met. Those who use social media mostly to seek information are motivated to participate by trust in sponsor, and having privacy expectations met. The types of incentives that work best to increase participation are consistent with the motivations identified: information about the nature and enforcement of privacy protection policies; ability to earn points toward rewards for quality of online contributions; and enforcing an online code of conduct. These results are of interest to marketing researchers because they identify strategies for improving participation that are within managerial control and are not dependent on intrinsic characteristics of the participant.*

KEYWORDS: *Online Survey, Participation Motivation, Incentives to Participate, Increasing Online Response Rate.*

1. Introduction

Internet penetration in North America is among the highest in the world. Marketing researchers are leveraging the advantages of these high levels of Web 2.0 access to transition research designs from traditional telephone surveys and personal interviews to online survey panels and communities. Given the increasing use of online technology to gather information, and the importance of consumer opinions and experiences in driving decisions about the type and range of products offered, marketers are interested in understanding how to engage consumers in sharing their opinions and increasing the quantity and quality of participation in online surveys.

There are concerns however about online surveys, namely non-probability samples and response rates affecting data quality. The purpose of this paper is to gain insight into the motivations to participate in online surveys and to identify the right participation incentives, which in turn may increase response rates. The paper is structured as follows:

- Changes in communication technology and administration of survey questionnaires are first analyzed.
- Survey participants from a national opt-in panel are initially segmented by the type and intensity of social media activities. Validated measurement scales describing a full range of social media activities are used in the clustering process (Foster, Francescucci & West, 2012; Li & Bernoff, 2008).
- The study captures the motivations of each segment to participate in online surveys. Measurement scales are submitted to psychometric analysis and aggregated into motivational constructs.
- The research explores various motivational incentives that might enhance segments' participation in online surveys.

2. Survey modes

Pollsters and marketing researchers have been forced to modify their survey practices and adjust to alternate data gathering platforms. For example, households' use of landlines is slowly but inexorably declining. According to National Center for Health Statistics, four-in-ten U.S. adults owned only a cellphone in 2013 (Blumberg & Luke, 2013). The decline of land line household penetration hurts random digit dialing (RDD) sampling frames, affecting coverage and introducing response biases. The Pew Research Center announced that 60 percent of national pools interviews are now administered by cellphones and 40% on landline phones (McGeeny & Keeter, 2014). However, cell phone surveys generate even lower response than traditional landline surveys, take twice longer to administer and cost 2.5 times more (American Association for Public Opinion Research [AAPOR], 2010).

Internet household penetration in North America is now higher than that of land lines, reaching nearly 80 percent of the population (Internet World Stats, 2012). There are many advantages associated with online surveys such as lower costs, flexible survey questionnaire designs and administration tools, personalized email pre-notification and reminders, and simplified data handling (Boyer, Adams & Lucero, 2010; Dillman, Smyth & Christian, 2009; Israel, 2011; Monroe & Adams, 2012). There are concerns, though, about the validity of non-probabilistic samples of opt-in panels and lower response rates to online surveys.

2.1 Non-probabilistic samples

Baker et al. (2013) have doubts about the validity of probability samples when coverage is low or non-response is high. These issues are not exclusive to online but to all forms of surveys. With the constant decline in coverage and non-response, some researchers (e.g., Groves, 2006; Savage & Burrows, 2007) wonder about the acceptability of non-probability sampling methods. In 2011, the American Association of Public Opinion Research (AAPOR) launched a task force "to examine the conditions under which various survey designs that do not use probability samples might still be useful for making inferences to a larger population" (www.aapor.org).

Probability sampling neutralizes exogenous covariates through randomization. The problem for non-probabilistic sampling is to identify and control exogenous variables associated with the object of the study in the sample selection. The validity of non-probabilistic approaches depends on the appropriateness of the theoretical frameworks and the quality of the variables used for respondent selection, and post hoc adjustment (Baker et al., 2010).

Ansolabehere and Schaffner (2014) explain that survey mode differences reported in the literature occur for a number of reasons. These studies are based on data collected five or more years ago when the techniques for constructing, matching and weighting opt-in Internet panels were not fully developed and that Internet usage among the public was not as it is today. Comparing simultaneous multi-mode national political surveys, Ansolabehere and Schaffner (2014) observe that a carefully executed opt-in Internet panel produces estimates that are as accurate as a telephone survey and that the two modes differ little in their estimates of other political indicators and their correlates. "Overall, our findings indicate that an opt-in Internet survey produced by a respected firm can produce results that are as accurate as those generated by a quality telephone poll and that these modes will produce few, if any, differences in the types of conclusions researchers and practitioners will draw in the realm of American public opinion" (Ansolabehere & Schaffner, 2014).

2.2 Response rates

Shih and Fan (2008) conducted a meta-analysis of thirty-nine studies to compare response rates from Web and mail surveys. Their findings reveal that mail surveys obtain a 10% higher response rate than Web surveys, although response rate differences vary considerably. In a another meta-analysis of 45 published and unpublished experimental comparisons between Web and other survey modes, Manfreda et al. (2008) note that Web surveys yield an 11% lower response rate compared to other modes. Similarly, Kim, Yu and Schwartz (2013) compare response rates of an online and face-to-face version of a daily visitor survey at five popular tourist attractions and find that the former have a 45% response rate and the latter a 62% response rate. This discrepancy goes beyond marketing research studies. In a study of course evaluations, Guder and Malliaris (2010) find that response rates drop by 26%, when the university switches from paper-based evaluations to online evaluations.

The completion rate gap between telephone and web survey has been narrowing in recent years, mainly because of the decline in telephone survey response rate, from 36 percent in 1997 to 9 percent in 2012 (Kohut et al., 2012). The difference in completion rate is significantly smaller with opt-in or panel members, as opposed to one-time participants (Manfreda et al., 2008). Many authors have looked at various methods to increase participation rate in online surveys (e.g., Bosnjak et al., 2008; Fan & Yan, 2010). Suggestions for enhancing response rates are applicable to all forms of surveys, including online questionnaire administration. They range from questionnaire design to personal invitation, reminders, and incentives.

Given the increasing use of online technology to gather information, and the importance of consumer opinions and experiences in driving decisions about the type and range of products offered, marketers are interested in understanding how to engage consumers in sharing their opinions and increasing the quantity and quality of participation in online surveys. This study looks at motivational incentives to complete online surveys.

3. Conceptual framework

The review of literature discusses research on motivation first, and then focuses on social media usage (e.g., Kahle & Valette-Florence, 2012; Lorenzo-Romero, Constantinides & Alarcón-del-Amo, 2012; Pagani, Hofacker & Goldsmith, 2011). Three streams of previous research provide the foundation for insights into motivation to participate in online surveys: (1) participation in online knowledge sharing communities of practice; (2) joining and participating in online social networks; and (3) joining web-based survey research panels. Although these three streams take different perspectives on online participation, they present similar results in that each identifies knowledge sharing, trust and reciprocity as strong drivers of joining and participating in a range of online activities. The review of literature is organized around these three common factors.

3.1 Knowledge sharing

The first strong driver identified by various researchers is knowledge sharing. The literature suggests that the knowledge sharing concept includes sub-topics related to the value of information, expertise, social connections and doing good. These sub-topics have application to motivation to participate in online social networks and online surveys.

3.1.1 Value of information

The first sub-topic under knowledge sharing focuses on the value of the information shared, and on the value of the information sharing process (Connolly & Bannister, 2008; Fitzgerald, 2004; Jun, Hu & Peterson, 2004). Bruggen and Dholakia (2010) investigate personality traits and their relationship with joining web-based survey panels, participating in online surveys, and expending effort on survey responses. They find that "need for cognition" or the enjoyment of thinking and learning (Cacioppo & Petty, 1982), "curiosity" or the need to investigate and seek information (Kashdan, Rose & Fincham, 2004), "openness" or the ability to adjust beliefs, and attitudes in light of new information attained (John, 1990) are positively associated with either or both of joining web panels and participating in online surveys.

3.1.2 Expertise

The second sub-topic under knowledge sharing is viewing it as a mechanism to demonstrate expertise. Wu and Sukoco (2010) conceptualize online participation in terms of McClelland's (1987) work on achievement, affiliation and power. Online participants share knowledge as a way of expressing personal competency and expertise (Ardichvili, Page & Wentling, 2003; Brown & Duguid, 2000). Further, using the online space to demonstrate expertise increases an individual's power, as he/she is more likely to gain recognition for his/her knowledge and to be able to influence others with the information shared (Bagozzi & Dholakia, 2006; Fuller, Jawecki & Muhlbacher, 2007; Sokolowski et al., 2000). A slightly different view on expertise and online participation is presented by Han et al. (2009) who position it in the context of self-perception theory (Tybout & Yalch, 1980), that is, whether individuals see themselves as the type who responds to surveys because of their ability to make a contribution.

Social cognitive theory also offers insights into expertise as part of the knowledge sharing motivation for participation in online surveys. The foundation of this theory is that social networks and a person's expectations and beliefs influence behavior. Concepts at the core of the theory include self-efficacy and outcome expectation, and research shows that both are influential in knowledge sharing (Hsu et al., 2007; Kankangalli, Tan & Wei, 2005; Wang & Lai, 2006). Self-efficacy is the judgment of one's ability to organize and execute given types of performances, while outcome expectation is the judgment of the likely consequences such performances produce (Chiu, Hsu & Wang, 2006). Self-efficacy has been applied to knowledge management to validate the effect of personal efficacy belief in knowledge sharing. According to knowledge sharing self-efficacy, a knowledge producer must have the perceived capability to contribute knowledge as the desire to share knowledge is not enough. Those with higher perceived self-efficacy are more willing to share knowledge (Pagani et al., 2011; Wang & Lai, 2006). Outcome expectation includes intrinsic factors such as recognition or pleasure derived from sharing knowledge, and extrinsic factors such as monetary reward. Researchers find that for those active in the online space, outcome expectation refers to expectations such as recognition, respect, reputation, and making friends. Results show that if participants believe that knowledge sharing increases their reputation or improves relationships they are more likely to share knowledge (Hsu et al., 2007).

3.1.3 Social connections

The third sub-topic within the knowledge sharing concept is making social connections. Wu and Sukoco (2010) investigate this as a motivator for online participation as affiliation (McClelland, 1987). They suggest that maintaining close and friendly relationships with others in the online space through knowledge sharing is an important motivator for participation, as is the perception of one's being responsible and co-operative (Han et al., 2009).

Chiu et al. (2006) use social cognitive and social capital theories to investigate the social perspective on the willingness of online participants to share knowledge. Results indicate that it is the features of social capital -- namely, ties between individuals, reciprocity and group identification through shared language and shared vision -- that increase quantity of knowledge sharing. The more social interactions undertaken by online participants, the greater intensity, frequency, and breadth of information exchange (Larson, 1992). Chiu et al. (2006) find that social capital factors such as social interaction and trust lead to a higher level of knowledge sharing in terms of both quality and quantity of knowledge shared. Improved social relationships also seem to motivate people to participate in the online space; the ability to interact with others online increases trust; and in turn, people are more comfortable in sharing knowledge.

3.1.4 Doing good

The final sub-topic in the knowledge sharing concept involves doing good or altruism. This construct is the degree to which a person is willing to increase other people's welfare without expecting returns. In terms of knowledge contribution, this means contributing knowledge without the outcome expectation of reciprocity. Research shows that those who feel good about contributing knowledge to help others tend to be more motivated to do so in an online environment. While Kankanhalli et al. (2005) and Wasko and Faraj (2005) find that enjoyment in helping others positively influences knowledge contribution, Wang and Lai (2006) are not able to replicate those findings.

3.2 Trust

Trust is the second of the common motivators identified across the three streams of literature. In terms of online participation, it means the reliability and confidence with which one views the online activity and those associated with it. Wasko and Faraj (2005) conceptualize online trust in terms of social capital. They define social capital as "resources embedded in a social structure that are accessed and/or mobilized in purposive action" (p. 38), and suggest that these social resources provide the conditions necessary for knowledge exchange to occur and can lead to greater knowledge sharing. Chiu et al. (2006) and Wasko and Faraj (2005) categorize relationships into three types: (1) *Structural* is the presence or absence of social interaction; (2) *relational* refers to trust, norms, reciprocity, and identification in that the person has a positive feeling toward the community; and, finally, (3) *cognitive* refers to a shared vision in terms of collective goals of members of a group and shared language through a common understanding of collective goals.

Kankanhalli et al. (2005) use relational capital to explain knowledge exchange and contend that trust, norms, and identification are social capital since they are organizational resources or assets rooted within social relationships. Broadly, social capital theory suggests that trust, shared norms and values among those engaged in online activities motivate knowledge sharing (Best & Krueger, 2006; Fassott, 2004; Song & Walden, 2007; Yoon, 2002), and this study proposes that these motivational constructs may also impact propensity to participate in online research.

Researchers describe the trust construct as a significant motivator in online participation (Corritore, Kracher & Wiedenbeck, 2003; Lin, Hung & Chen 2009; Ridings, Gefen & Arinze, 2002; Usoro et al., 2007). Because of the lack face-to-face social cues in online activities, cultivating trust is both important and more difficult. When others confide personal information in online activities, trust is higher. In addition, in a trusting environment people are more inclined to help others and request help from others (Ridings et al., 2002; Usoro et al., 2007). Similarly, Lin et al.'s (2009) study shows that trust significantly affects knowledge sharing self-efficacy, which positively affects knowledge sharing. Ridings et al. (2002) explore the antecedents and effects of trust in online activities. The study measures two dimensions of trust -- ability and benevolence/integrity. Both dimensions increase through perceived responsive relationships in the online space, by a general disposition to trust, and by the belief that others confide personal information.

Most research on trust focuses on its role in promoting online engagement. Privacy concerns, in contrast, are about inhibiting participation in online communities and sharing knowledge because of a lack of trust. This includes issues related to security and the confidentiality and anonymity of information collected (Dommeyer & Gross, 2003; Han et al., 2009; Youn & Lee, 2009). Research shows that people want assurances that information and surveys are used for stated purposes only and that adequate measures exist to protect privacy and provide security. Not addressing these concerns may inhibit online sharing of knowledge and information and reduce trust (Ardichvili, 2008; Hsu et al., 2007; Phelps, D'Souza & Nowak, 2001).

3.3 Reciprocity

The final common factor identified in the literature is reciprocity, which can also be conceptualized as feedback. According to social exchange theory, "individuals engage in social interaction based on an expectation that it will lead in some way to social rewards" (Wasko & Faraj, 2005, p. 39). People share knowledge with the expectation that they will receive rewards, which may include approval, status, and respect (Kankanhalli et al., 2005; Wasko & Faraj, 2005). People share knowledge if they believe it increases their reputation (Wasko & Faraj, 2005). Likewise, increasing the benefits of and decreasing the cost of knowledge sharing encourages knowledge sharing (Dillman, 2000; Kankanhalli et al., 2005).

Participants share knowledge and provide feedback because there is an expectation that doing so will be useful to the knowledge sharer and at some point the favor will be returned (Han et al., 2009). The greater the anticipated reciprocity in a relationship, the more favorable is the attitude toward knowledge sharing. Further, receiving feedback from others through online participation provides mutual benefit thereby increasing the desire to share knowledge (Chiu et al., 2006). The link between the norm of reciprocity and trust is less clear. While Lin et al. (2009) find that the norm of reciprocity is a key determinant of trust in knowledge sharing, Wasko and Faraj (2005) and Chiu et al. (2006) find that reciprocity is not a significant predictor of knowledge contribution. Fahey, Vasconcelos and Ellis (2007) find that introducing rewards into online activities actually damages the exchange of knowledge because the economic self-interest rather than moral obligation becomes a more important motivator.

In summary, researchers identify a number of motivational constructs related to knowledge sharing that may have application to online survey research participation. These include the value of the information shared, trust and shared norms, self-efficacy and perceived expertise, feedback and reciprocity, altruism, social interaction and privacy concerns. One issue that has not been addressed by previous research is whether these motivational constructs are differentially important within online user groups.

3.4 Social media user groups

Social media is an emerging field and the tendency has been to dichotomize behavior into users and non-users, assuming that users represent one homogenous group. However, as participation has increased and as the options for networking and communicating online have proliferated in terms of type, scope and device, researchers are interested in investigating and understanding the nuances of online behavior. Almost three quarters of U.S. online adults use social networking sites, 71 percent of which are on Facebook (Duggan & Smith, 2013). Users of social networking sites and instant messages have been studied from a variety of perspectives, including both psychology and usage behavior.

3.4.1 Personality traits

Nadkarni and Hofmann (2012) systematically review the literature on the psychological factors contributing to Facebook use. They identify 42 studies focusing on the identity construction (demographics and personality characteristics) of registered Facebook users. They also look at the influence of the use of Facebook on narcissism and self-esteem, and the role of Facebook in acting as an avenue for self-presentation and self-disclosure. Facebook use is primarily determined by the need to belong and the need for self-presentation. These needs can act independently and are influenced by a host of other factors, including the cultural background, socio-demographic variables, and personality traits, such as introversion, extraversion, shyness, narcissism, neuroticism, self-esteem, and self-worth (Nadkarni & Hofmann, 2012).

Social media participation has also been studied under the Big-Five model for assessing broad level personality traits such as extraversion, neuroticism, openness to experiences, agreeableness, and conscientiousness (Ehrenberg et al., 2008; John & Srivastava, 1999). Research based on the Big-Five (e.g., Amichai-Hamburger, 2002; John & Srivastava, 1999; Ross et al., 2009), suggests that extraversion, emotional stability and openness to experience are related to uses of social applications on the Internet. Extraversion and openness to experiences are positively related to social media use. Controlling for socio-demographics (age and gender) and life satisfaction, emotional stability appears to be a negative predictor (Correa, Hinsley & De Zúñiga, 2010). Men with greater degrees of emotional instability are more likely to be regular users. The correlation between extraversion and social media is stronger among young adults. On the other hand, openness to new experiences appears as a significant predictor of social media use for the more mature segment (Correa et al., 2010).

3.4.2 Behavioral usage

Marketing and social media researchers conceptualize online behavior in terms of tasks performed (Li & Bernoff, 2008). Ip and Wagner (2008) base their framework on the frequency of using social media regardless of the type of task or activity. Others investigate usage in terms of motivation, such as exchange (Hersberger, Murray & Rioux, 2007) or benefits (Wasko & Faraj, 2005). Less than 10% of users, sometimes classified as Creators or Bloggers, are behind 75% of all user generated content. Creators are a new category of social influencers (Fennemore, Canhoto & Clark, 2011). Forrester Research (http://www.forrester.com) has developed a proprietary social technographics profile to segment users of technology and social media sites. The firm created a technographics hierarchy ladder where self-described Creators, Conversationalists, Critics, Collectors, Joiners, Spectators and Inactives are put on different rungs (Li & Bernoff, 2008)

Foster et al.'s study (2012) combines some of these approaches to identify four segments of social media user groups that differ in terms of the nature of their online activities and the frequency of participation. The first group, Social Media Technology Mavens participate highly in both information type and social type online activities when compared to the other segments. The second segment, the Minimally Involved group, is less likely to participate in all types online activities compared to others. The third segment, the Info Seekers are more likely to be involved in passive, information-search types of online activities such as reading the comments of others, but are less engaged when it comes to more active social activities. Socializers are higher than info seekers when it comes to more social interaction, such as posting comments to the social network pages of others, but are less involved in posting informational content. The previous research revealed that these four segments differ not only in terms of online behavior, but also in the reported motivations for engaging in online activities. This study examines the motivations of the four social media user group segments to participate in knowledge sharing through online survey research, and uses that understanding to test the appeal of various strategies for increasing online participation.

4. Research hypotheses and methodology

Social media activities include data browsing, socializing and user-generated contents. These activities can be represented on a continuum similar to Forrester's technographics ladder. Browsing social media sites is an antecedent to socializing and user-generated contents. Social media users form a diverse community and can be segmented along their social network behavior.

H_1: Social media activities enable well delimited actionable social media user segments.

H_2: Each social media user segment exhibits different motivations to participate in online surveys.

H_3: Each social media user segment is likely to respond to specific online survey participation incentives.

The research model is presented in Figure 1. Social media activities shape social network user segments. These segments have different motivations to join opt-in survey panels. They are also likely to respond to varied survey participation incentives.

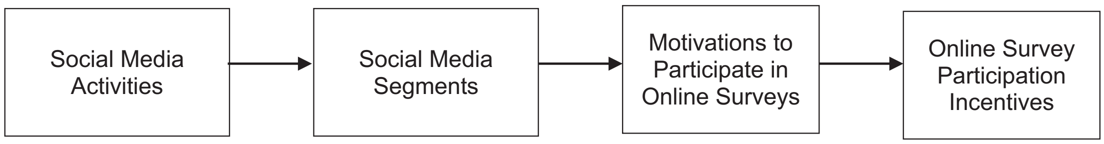

Figure 1 Theoretical Framework

The total sample is 1,501. Respondents belong to an existing opt-in survey research panel comprised of reward plan members of a major airline and two large retailers. In return for participation in online surveys, respondents receive reward points in the program in which they are registered.

Those responding to the survey are representative of the demographics of the Canadian population in terms of regional distribution, age and gender, according to the latest information from Statistics Canada. Online respondents have been a member of this panel for an average of 47 months.

The survey instrument is designed to cover three areas: (1) social media activities, from which we derive our social media user group segments, and which are based on previous research; (2) motivation to participate, in which we test the applicability concepts described in the review of literature as drivers for an individual to participate online, using existing items where available; and (3) participation incentive items are taken from the industry best practice and are tested against underlying motivators.

5. Findings

5.1 Social media activities

In order to identify user segments, Foster et al.'s (2012) original measurement scale was updated for content sharing sites, microblogging services, location-based services, smartphones, and brand social media sites reflecting changes in technology. The initial set of core items for identifying user segments is from the list of online social technology activities developed by Li and Bernoff (2008). One of the limitations in using questions from previous studies on social media activities is that this is a dynamic field and in order to be relevant the items included have to be constantly updated in response to innovations in technological capabilities and accessibilities.

Table 1 describes the scale items with their psychometric properties, sources, factor loadings and cross-loadings. The three constructs, information seeking, socializing and active participation, have alpha coefficients of .77, .83, and .82, respectively. The measurement scales are subjected to a confirmatory factor analysis (Figure 2) using

Table 1 Social Media Activity Level

Measurement Scales Factor Loadings and Alpha Coefficients	Posting Contents	Socializing	Info Seeking
Active Participation/Posting Contents (Alpha = .817)			
1. Posting content to content sharing sites such as Tumblr, Digg, Reddit, Technorati or YouTube	**.814**	.178	.258
2. Posting to a micro-blogging service such as Twitter	**.801**	.223	.207
3. Publishing or updating your personal web page (excluding social networking sites)	**.783**	.231	.147
Socializing (Alpha = .829)			
1. Visiting social networking sites, such as Facebook, LinkedIn or MySpace	.069	**.894**	.139
2. Maintaining/updating your profile on a social networking site	.357	**.770**	.204
3. Posting comments to someone else's social networking page/account	.394	**.763**	.218
Information Seeking (Alpha = .765)			
1. Reading customer ratings and/or product/ service reviews	.232	.049	**.837**
2. Using a search engine to find information prior to a product or service purchase	.086	.241	**.822**
3. Reading online forums, blogs and discussion groups written by others	.335	.249	**.669**

Source: Foster et al. (2012); Li and Bernoff (2008).

AMOS, yielding an adequate fit ($\chi^2 = 35.59$, df = 16, CFI = .997, RMSEA = .026, RMR = .012).

Error correlations illustrate that: (1) socialization indicators correlate with information seeking; and (2) active participation indicators correlate to some extent with socialization. Error correlations emanating from the first socializing indicator ("*Visiting social networking sites*, *such as Facebook*, *LinkedIn or MySpace*") are negative. Proactive social media participants do more than just visit social networking sites, and those who browse social media are not necessarily proactive participants.

It appears that the three latent constructs are highly correlated and nested within each other: Information seeking → Socialization → Active Participation (Posting contents). Information seeking is likely to be an antecedent of socialization. Social media browsers can seek information without necessarily engaging is socialization. On the other

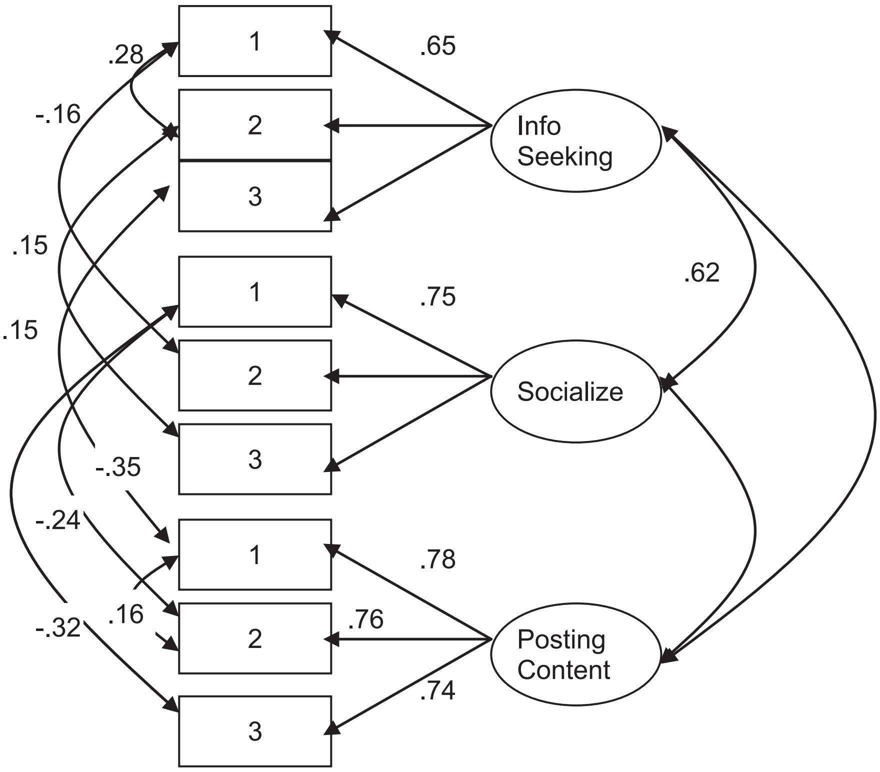

Figure 2 CFA on Social Media Activity Level

Note. Method: Maximum Likelihood, Standardized Coefficients, all p-values < .05. χ^2 = 32.592; DF = 16; χ^2/DF = 2.037; CFI = .997; RMSEA = .026; RMR = .012.

hand, active socializers are also likely to be information seekers. In turn, socialization is antecedent to active social media participation. Online community members who socialize do not have to be content creators. The inverse is not highly probable: community members who are regular content providers are more than likely to score high on all types of online social media activities.

5.1.1 Social media behavior segmentation

Having established three distinct types of online behaviors (information seeking, socializing, and creating contents), cluster analysis is performed on factor scores, using and comparing two clustering techniques: the two-step and K-means clustering algorithms. The Bayesian Information Criteria (BIC) from the two-step clustering confirms four optimal clusters. Table 2 shows the final cluster centers from K-means clustering.

The labels for the four clusters are: (1) Social Media Technology Mavens, (2) Info Seekers, (3) Socializers, and, (4) Minimally Involved. The maven group represents 7% of the sample and has the highest score on the active participation construct (posting and

Table 2 Social Media Activity Clusters

	Clusters			
	Mavens	**Socializers**	**Minimally Involved**	**Information Seekers**
N = 1,501	7.4%	27.4%	41.6%	23.6%
Social Media Activity Constructs				
Information Seeking	.589	-.141	-.645	**1.123**
Active on social media	.469	**1.188**	-.560	-.542
Active Participation (Posting Contents)	**2.842**	-.447	.008	-.386

creating contents). It is also high on all other factors. This group participates to a greater extent in all types of online activities and applications than the other three segments identified through clustering. Info Seekers represent 24% of the sample and score high on the need for information, but low on socializing and creating contents. Their focus is on seeking information from others, such as reading comments and reports posted by members of the online community. Socializers account for 27% of the cohort. The main focus of their online activities is to interact with others and maintain social connections on social networking sites. They score low on user-generated contents. Finally, the Minimally Involved group, representing 42% of the sample, is low on both information-seeking behavior and social interaction. The sample originates from an online opt-in panel; therefore, the label minimally involved is relative to this specific cohort.

5.1.2 Segment profiles

The average age of the Social Technology Mavens is 34; they are more likely to be male (71%), and engage in more types of online activities and applications (LinkedIn, Twitter, Slideshare, consumer information sites (e.g., Trip Advisor), and group buying (e.g., GroupOn), online professional and work groups, special interest groups) than other segments. Info Seekers, are more likely to be male (60%), have an average age of 49 and are not heavy users of any online activities or applications, but do report more engagement than other segments except for mavens. Socializers are more likely than other segments to be female (66%) and have an average age of 42. They are heavy users of Facebook, with 41% reporting spending 10 hours per week or more on Facebook, but not on other online activities or applications. The Minimally Involved group has an average age of 52 and is split almost equally between males and females. They are minimal or non-users of all types of online activities and applications.

5.2 Motivation to participate

Motivational constructs are extracted from the extant literature and adapted to the current technology environment. Table 2 describes the motivational constructs, and the supporting literature already reviewed (Chiu et al., 2006; Foster et al., 2012; Hsu & Lin, 2008; Hsu et al., 2007; Kankanhalli et al., 2005; Larson, 1992; Lin et al., 2009; Ridings et al., 2002). Emerging constructs are participants' self-perceived expertise (alpha = .93), familiarity and trust toward survey sponsors (alpha = .86), the propensity for sharing and participation in social media (alpha = .85), valuing sponsors or company feedback (alpha = .88), and concerns for privacy (alpha = .79).

First, the motivational constructs and indicators are validated on the entire cohort (χ^2 = 322.48, df = 122, CFI = .987, RMSEA = .033, RMR = .04). Subsequently, the same CFA is replicated on the various online member segments to investigate multi-group measurement invariance (Table 3 and Figure 3).

Table 3 Survey Participation Motivational Constructs

Measurement Scales Factor Loadings and Alpha Coefficients	**Factors**				
	1	**2**	**3**	**4**	**5**
Alpha coefficient	.928	.861	.845	.884	.793
A. Perceived Expertise (Hsu et al., 2007; Kankanhalli et al., 2005; Lin et al., 2009)					
1. When talking about new products and technologies with others, I am usually the one with the most detailed knowledge.	**.892**	.124	.182	.087	.045
2. I am known as the "go to" person for people who want to hear about the latest trends.	**.881**	.105	.210	.104	.013
3. I pride myself on usually being the first person among my friends to have heard of a new product or technology about to be offered on the market.	**.862**	.101	.231	.114	.016
4. People often ask me for product recommendations.	**.844**	.140	.125	.181	.062
B. Familiarity and Trust (Chiu et al., 2006; Hsu & Lin, 2008; Hsu et al., 2007; Lin et al., 2009; Ridings et al., 2002)					
1. I am more willing to give my honest opinion online when I trust the company I am being asked about.	.088	**.794**	.115	.240	.170
2. I am more likely to give my opinion online when I am familiar with the company whose product/service I am being asked about.	.143	**.790**	.170	.278	.125
3. I am more likely to give my opinion online when the company I am being asked about is revealed to me and not anonymous.	.093	**.770**	.197	.202	.171
4. I am more likely to share my opinion about a company/sponsor if I receive an incentive such as cash or loyalty points.	.169	**.676**	.200	.192	.140

Table 3 Survey Participation Motivational Constructs (continued)

Measurement Scales Factor Loadings and Alpha Coefficients	Factors				
	1	2	3	4	5
C. Sharing and Participation (Chiu et al., 2006; Hsu & Lin, 2008; Hsu et al. 2007; Larson, 1992)					
1. If someone posts personal information about themselves in an online community, I am more likely to trust them.	.153	.176	**.806**	.097	.061
2. Participating in an online community makes it easier for me to meet others who share my interests.	.209	.131	**.788**	.209	.117
3. I share personal information as part of being a member of an online community.	.136	.101	**.788**	.157	.011
4. If I post my opinions in an online community, I will make more friends in the online community.	.290	.276	**.704**	.064	-.021
D. Getting Company Feedback (Chiu et al., 2006; Hsu et al., 2007; Kankanhalli et al., 2005; Lin et al., 2009)					
1. I like it when a company tells me how my feedback has influenced their decisions and/or products after I share my opinion with them.	.169	.306	.188	**.816**	.141
2. When companies give me feedback on how my information influenced their decision-making, I am more likely to share my opinion with them in the future.	.180	.302	.207	**.803**	.145
3. I enjoy sharing my opinion with companies in order to contribute to the betterment of their product.	.153	.345	.160	**.752**	.147
E. Privacy (Foster et al., 2012; Hsu et al., 2007)					
1. I am concerned that companies who sponsor online communities are keeping track of my online activities and using that information for other purposes.	.026	.161	.083	.097	**.842**
2. Concerns about who has access to my posts on an online community make me less likely to share my opinions.	.021	.149	.050	.116	**.808**
3. I feel that it is an invasion of privacy for an online community to keep track of my online activities.	.047	.131	-.005	.100	**.808**

5.2.1 Motivation to participate by segment

The initial CFA on motivational scale items identifies five constructs: (1) Perceived Expertise, (2) Familiarity and Trust, (3) Sharing and Participation, (4) Feedback (Reciprocity), and (5) Privacy. The first order CFA invariance is tested against each social media segment. The multigroup model (Figure 3) outlines structural and loading invariance (Chi-square = 1,169.824, DF = 523, χ^2/DF = 1.767, CFI = .972, RMSEA = .023).

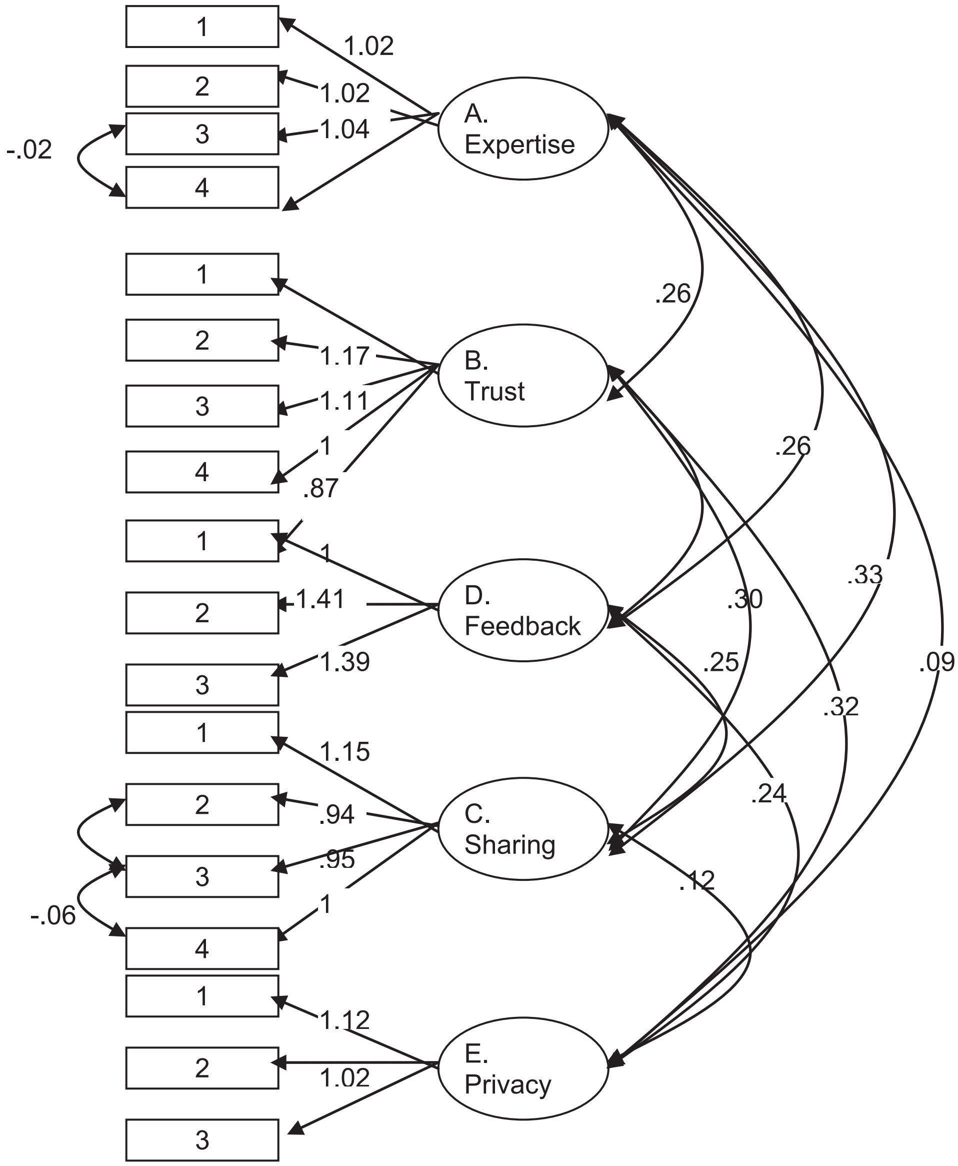

Figure 3 Multigroup CFA on Motivational Constructs

Note. Method: Maximum Likelihood, Unstandardized Coefficients, all *p*-values < .05. χ^2 = 1169.824; DF = 523; χ^2/DF = 1.767; CFI = .972; RMSEA = .023.

All parameters constrained, except for the cross-loading path from Trust to Feedback first indicator ("*I like it when a company tells me how my feedback has influenced their decisions and/or products after I share my opinion with them*") that was set free.

The model is constrained on all parameters with one exception. In the case of the minimally involved, a cross-loading path between Trust and one of the Feedback indicators ("*I like it when a company tells me how my feedback has influenced their* *decisions and/or products after I share my opinion with them*") is set up. The cross-loading path decreases the chi-square by as much as 70, and intuitively links Trust and Feedback together.

Table 4 shows multigroup model comparisons. The unconstrained multigroup has a superior fit (χ^2/DF = 1.82, RMSEA = .023) than the single group CFA (χ^2/DF = 2.64, RMSEA = .033), which supports the multigroup approach. The multigroup CFA with constrained measurement weight (χ^2/DF = 1.77, RMSEA = .023) is marginally better than the unconstrained model. The Akaike Information Criterion (AIC) also indicates a more parsimonious model. The model slightly deteriorates when considering structural covariance invariance (χ^2/DF = 2.06, RMSEA = .027). However, it is more than adequate and still offers a better fit than the single group CFA. The conclusion is that motivational constructs are structurally invariant and quasi measurement invariant across all segments. Therefore, there is a valid measurement tool with which to compare segments.

An ANOVA comparing summated latent motivations to participate in online surveys (Table 5) shows significant differences among social media clusters. For the total sample,

Table 4 Motivation Multigroup CFA

	χ^2	DF	χ^2/DF	CFI	RMSEA	AIC
Single group	322.48	122	2.64	.987	.033	
Multiple groups (4):						
Unconstrained	886.76	487	1.82	.972	.023	1,280.764
Measurement Weights	924.29	523	1.77	.972	.023	1,246.292
Structural Covariance	1,169.82	568	2.06	.958	.027	1,401.824
Saturated model	.000	0		1.000		1,368.000
Independence model	14,929.01	612	24.39	.000	.125	15,073.012

Table 5 Motivational Constructs by Segments

Cluster s	Perceived Expertise	Familiar& Trust	Sharing and Participation	Feedback	Privacy
1. Mavens (7%)	**3.65**	**3.81**	**3.51**	**3.98**	3.52
2. Socializers (27%)	2.57	**3.45**	**2.59**	3.56	3.58
3. Minimally Involved (42%)	**2.20**	**2.78**	**1.93**	**2.99**	**3.26**
4. Info Seekers (24%)	**2.88**	**3.26**	**2.28**	3.51	3.59
Total	2.57	3.15	2.31	3.34	3.44

Note. Summated motivation scales from 1 to 5, where 1 is "Does not describe me at all," and 5 is "Very much describes me." Mean values in bold face, significantly different at *p*-value < .05.

the motivational factors that score highest include familiarity and trust (3.15 out of 5 -- knowing the name of the sponsor, being familiar with the sponsor, and trusting the sponsor), feedback (3.34 out of 5 -- knowing how the information shared influenced decisions), and privacy (3.44 out of 5 -- ensuring that information is protected and identity is secure when sharing information online). Individuals categorized as mavens perceive themselves as experts on new products, technologies and trends (3.65 out of 5 vs. 2.57 for the entire cohort). As self-perceived experts, they are more than willing to provide their opinions. Mavens, socializers, and info seekers are more likely to participate if they feel familiar (3.81, 3.45 and 3.26 vs. 3.15) with the sponsoring organization. Mavens and socializers also have a greater propensity to share their personal information with other community members (3.51 and 2.59 vs. 2.31). Further, mavens appreciate feedback from companies or sponsoring organizations (3.98 vs. 3.34). On the other hand, the minimally involved group is less likely to value feedback (2.99 vs. 3.34). Finally, the minimally involved group appears less concerned than any other segment with privacy issues (3.26 vs. 3.44).

5.3 Participation incentives

Firms maintaining online panels for surveys have toolboxes of incentives to promote participation. These are empirical techniques developed in the trade that have not been validated in the scientific literature. After conducting key informant interviews with ten senior executives in online marketing research companies to understand current practices and strategies to enhance participation, thirteen possible non-monetary incentives (Table 6) to promote online participation are identified. The next section investigates the overall appeal of each incentive and then the appeal by social media user group.

Online panel and survey managers have batteries of incentives to promote survey participation. The incentives with the highest likelihood of increasing participation in online surveys for the total sample include: (1) Having the policy about the protection of personal information prominently displayed (3.35 out of 5); (2) Allowing members to earn points toward rewards for the quality of their contributions to the online community (3.36 out of 5); and (3) the online community enforcing a code of online conduct (3.39 out of 5).

Social media segments are liable to react differently to non-monetary participation incentives offered by online survey sponsors. Table 6 displays average response of each segment to various incentives. Mavens are self-motivated, and do not report that any of non-monetary incentives will influence their level of participation in online surveys. Socializers and the minimally involved report welcoming: (1) policies about the protection of personal information (means > 3.5 out of 5); (2) enforced codes of online conduct (means > 3.5); (3) the choice to reveal true identity or use an avatar (means > 3.2); and (4) earning rewards for the quality of contributions (means > 3.4). Finally, none of the

Table 6 Non-Monetary Participation Incentives and Social Media Segments

	1 Mavens	2 Socializers	3 Minimally Involved	4 Info Seekers	Total
1. Online community members provide detailed information about interests and buying habits.	2.74	2.67	2.74	2.68	2.69
2. Policy about the protection of personal information is prominently displayed	3.08*	**3.49***	**3.53***	3.18*	3.35
3. Members can earn points toward rewards for the quality of their contributions to the online community.	3.10*	**3.42***	**3.58***	3.24*	3.36
4. Members can spend reward points to access information not available to the general membership.	2.80	3.03	3.00	2.90	2.95
5. Online community provides different ways for members to communicate with each other	2.93*	3.00*	3.11*	2.82*	2.95
6. Online community provides tips about how to make your contribution meaningful	2.82*	3.03*	3.13*	2.98*	3.01
7. Online community allows members with like-minded interests to contact each other.	2.88*	2.95*	2.96*	2.72*	2.87
8. Members can view other members' personal information.	2.61	2.35	2.35	2.40	2.39
9. Members have the choice as to whether they reveal their true identity or use an avatar.	2.92*	3.19*	**3.33***	2.98*	3.12
10. Members are not limited to written posts to share their opinions, but can post pictures, videos etc.	2.97*	2.99*	3.12*	2.75*	2.93
11. The online community enforces a code of online conduct.	3.06*	**3.48***	**3.59***	3.26*	3.39
12. Members have the ability to rate the contributions of others on a specific topic.	2.84*	2.95*	3.06*	2.80*	2.91
13. Sponsor recognizes outstanding contributions online for the whole community to see.	2.95*	3.04*	3.09*	2.90*	2.99

Note. * Sig < .05. Scales 1 to 5, where 1 is much less likely to share opinion and 5, much more likely to share opinion. Values in bold underscore mean responses above 3.3 out of 5.

incentives appeals to info seekers who appear to be relatively impermeable to the various industry offers.

6. Discussion and managerial implications

The research supports H_1 by delineating well defined social media user segments. It replicates the findings of an earlier study by Foster et al. (2012) on a limited sample of university students, which identified four distinct segments among social media users. Because the sample for this study is broader in terms of age and regional distribution than those previous studies, it provides greater ecological validity, as the findings can be generalized to a wider social media community. This study also demonstrates that these constructs are highly correlated and nested within each other. Involvement in social media progresses from information seeking to online socializing to content creation. There is an implied hierarchy in that those who post comments also socialize and seek information; those who socialize also seek information.

The social media segmentation suggests that the younger the individual, the higher the engagement in social media activities. This is not surprising, given that the adoption of new technology and the ease with which technology is integrated into daily life is associated with younger age groups (Ispos Reid, 2012).

Research findings partially support H_2, which posits that each social media user segment exhibits different motivations to participate in online surveys. Some motivations factors apply to all, while others are segment specific.

The data suggest that the top motivators for the entire sample are: privacy -- ensuring privacy concerns are adequately addressed; feedback -- knowing how their information is used by the company and that it was useful; and finally familiarity and trust -- knowing and trusting the sponsor of the survey. The emergence of "Feedback" as a strong motivator is consistent with the literature on Social Exchange Theory and reciprocity in that knowledge sharing increases when the sharer receives some benefit as a result of sharing (Chiu et al., 2006; Han et al., 2009; Kankanhalli et al., 2005; Wasko & Faraj, 2005). "Familiarity and trust" confirms previous research indicating that trust is a significant predictor of virtual community member's desire to exchange information (Corritore et al., 2003; Lin et al., 2009; Ridings et al., 2002; Usoro et al., 2007). Likewise, it is not surprising that privacy concerns emerge as a deterrent to online survey participation, as other researchers have documented a variety of security, confidentiality, safety and anonymity issues related to using and sharing information through the Internet and particularly social media sites (Han et al., 2009; Hsu et al., 2007; Levin et al., 2008).

What is interesting about the top motivators is that they are within the sponsors' control. They are not dependent on peer response or intrinsic motivators within individuals. If sponsors of online surveys take steps to protect the information provided to them, make their privacy policies prominent and transparent, provide feedback about how information is being used for decision-making, and recognize contributions through rewards and incentives, the findings suggest that these actions positively reinforce motivation to participate.

This study reveals that different motivations are important for different user group categories. Mavens are a highly motivated group and identify all of the motivations -- perceived expertise, familiarity and trust, sharing and participation, feedback and privacy as triggers for their participation in online surveys. This broad range of intrinsic and extrinsic factors is consistent with Foster et al.'s (2012) finding that mavens are motivated to participate in social media as a form of self-expression. They feel competent and confident and believe they have important information to share. This perceived expertise is what differentiates mavens from the other user groups. Likewise, they have high standards relating to the protection of their privacy, the need for meaningful feedback if they provide information, their desire to know to whom they are providing information, and their commitment to enhancing the broader community through online sharing. None of the other segments is motivated as highly or by as many of the factors identified as are the mavens. Two of the five factors are greater than 3.5 out of 5 for Socializers and Info Seekers: feedback and privacy, but neither are statistically significant. None of the factors is greater than 3.5 for the minimally involved. In terms of statistical significance, the data indicate that socializers are significantly more motivated than the total sample by familiarity and trust, and sharing and participation, even though the average score is less than 3.5 out of 5. Info seekers are significantly more motivated than the total sample on perceived expertise, familiarity and trust, and sharing and participation even though the average score is less than 3.5 out of 5. The minimally involved group is significantly lower on all factors than the rest of the sample. The findings suggest that it is not one factor that motivates online participation, but rather a combination of factors that work together. This makes the development and design of promotional and engagement material more complex because all of the factors must be included in the positioning of the importance of participation.

Finally, this study focuses on identifying effective strategies for promoting the quality and quantity of participation on online survey research. Motivations are important to consider in that they can inform strategy necessary to encourage participation in the online space (Lorenzo-Romero et al., 2012). The findings suggest partial confirmation of H_3 (Each social media user segment is likely to respond to specific online survey participation incentives). Some incentives are likely to apply to all, while others would be specific to some segments.

The most effective incentives are linked to the most important motivations. Participants are motivated by "familiarity and trust" and this relates to their report of an increased likelihood to share opinions online if sponsors prominently display how they protect respondents' personal information. "Feedback" is linked to the reported positive impact of the opportunity for respondents to earn points for the quality of their contributions, which can later be used for rewards. Finally, adequately addressing privacy issues as a motivator are consistent with the positive response to enforcing an online code of conduct (Rao & Quester, 2006). Previous research shows an interesting contradiction. Although social media users report high concerns related to privacy, they do not indicate any intention of changing their online behavior to protect their privacy (Levin et al., 2008), so it is not clear that addressing privacy concerns will increase online participation. For those who have already agreed to be part of an online panel and thus have accepted that some information will be shared, it may mean that failing to present a privacy policy, regardless of its contents, may deter participation, as opposed to needing specific elements of a privacy policy in order to promote participation.

Specific motivations are also linked to specific incentives. Those who are motivated by the need to participate and share are more likely to participate more if the format provides additional opportunities for online sharing and connecting with those of like interests. Those, for whom trust and familiarity are important, are most influenced by options that address privacy concerns and provide rewards for the quality of contributions. Adequately responding to privacy concerns are important for those who report valuing privacy. This suggests that when designing new incentives to increase participation that marketing research firms should start with motivations because there is consistency between motivations and the appeal of particular incentives.

Mavens appear intrinsically motivated to participate online, and thus are not particularly incented to increase their level of participation by any of the options tested. Socializers and the minimally involved are both significantly motivated by displaying privacy protection information, rewards for quality contributions and enforcing an online code of conduct. Info seekers are also motivated by the same items more than other options, but at a lower level than for the other two groups. This suggests that marketing research companies should focus their attention on incentives in these three areas (trust, privacy, feedback) because: (1) they are consistent with the most important motivations for survey respondents; (2) they are consistently appealing, albeit at different levels, across three of the four social medial users groups; and (3) they are within the control of the marketing research company for development and implementation and not dependent on the intrinsic motivations of individuals to be effective. In terms of limitations, while this study was conducted with a representative sample in terms of age, gender and regional distribution, it only includes respondents who are current members of an online survey panel. A broader sample may have yielded different results.

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References

American Association for Public Opinion Research. (2010), 'New considerations for survey researchers when planning and conducting RDD telephone surveys in the U.S. with respondents reached via cell phone numbers', available at www.aapor.org/Cell_Phone_Task_Force_Report.htm (accessed 25 March 2014).

Amichai-Hamburger, Y. (2002), 'Internet and personality', *Computers in Human Behavior*, Vol. 18, No. 1, pp. 1-10.

Ansolabehere, S. and Schaffner, B.F. (2014), 'Does survey mode still matter? Findings from a 2010 multi-mode comparison', *Political Analysis*, Vol. 22, No. 3, pp. 285-303.

Ardichvili, A. (2008), 'Learning and knowledge sharing in virtual communities of practice: motivations, barriers and enablers', *Advances in Developing Human Resources*, Vol. 10, No. 4, pp. 541-554.

Ardichvili, A., Page, V. and Wentling, T. (2003), 'Motivation and barriers to participation in virtual knowledge-sharing communities of practice', *Journal of Knowledge Management*, Vol. 7, No. 1, pp. 64-77.

Bagozzi, R.P. and Dholakia, U.M. (2006), 'Open source software user communities: a study of participation in Linux user groups', *Management Science*, Vol. 52, No. 7, pp. 1099-1115.

Baker, R., Brick, J.M., Bates, N.A., Battaglia, M., Couper, M.P., Dever, J.A., et al. (2013), 'Summary report of the AAPOR task force on non-probability sampling', *Journal of Survey Statistics and Methodology*, Vol. 1, pp. 90-143.

Best, S.J. and Krueger, B.S. (2006), 'Online interactions and social capital: distinguishing between new and existing ties', *Social Science Computer Review*, Vol. 24, No. 4, pp. 395-410.

Blumberg, S.J. and Luke, J.V. (2013) 'Wireless substitution: early release of estimates from the national health interview survey, January-June 2013', available at www.cdc.gov/nchs/data/nhis/earlyrelease/wireless201312.pdf (accessed 23 March 2014).

Bosnjak, M., Neubarth, W., Couper, M.P., Bandilla, W. and Kaczmirek, L. (2008), 'Prenotification in web-based access panel surveys: the influence of mobile text messaging versus e-mail on response rates and sample composition', *Social Science Computer Review*, Vol. 26, No. 2, pp. 213-223.

Boyer, C.N., Adams, D.C. and Lucero, J. (2010), 'Rural coverage bias in online surveys?: evidence from Oklahoma water managers', *Journal of Extension*, Vol. 48, No. 3, Article 3TOT5, available at http://www.joe.org/joe/2010june/tt5.php (accessed 24 March 2014).

Brown, J.S. and Duguid, P. (2000), *The Social Life of Information*, Harvard Business School Press, Boston, MA.

Bruggen, E. and Dholakia, U.M. (2010), 'Determinants of participation and response effort in web panel surveys', *Journal of Interactive Marketing*, Vol. 24, pp. 239-250.

Cacioppo, J.T. and Petty, R.E. (1982), 'The need for cognition', *Journal of Personality and Social Psychology*, Vol. 42, No. 1, pp. 116-131.

Chiu, C.M., Hsu, M.H. and Wang, E.T.G. (2006), 'Understanding knowledge sharing in virtual communities: an integration of social capital and social cognitive theories', *Decision Support Systems*, Vol. 42, pp. 1872-1888.

Connolly, R. and Bannister, F. (2008), 'Factors influencing Irish consumers' trust in internet shopping', *Management Research News*, Vol. 31, No. 5, pp. 339-358.

Correa, T., Hinsley, A.W. and De Zúñiga, H.G. (2010), 'Who interacts on the Web?: the intersection of users' personality and social media use', *Computers in Human Behavior*, Vol. 26, No. 2, pp. 247-253.

Corritore, C.L., Kracher, B. and Wiedenbeck, S. (2003), 'On-line trust: concepts, evolving themes, a model', *International Journal of Human-Computer Studies*, Vol. 58, No. 6, pp. 737-758.

Dillman, D.A. (2000), *Mail and Questionnaire Internet Surveys: The Tailored Design Method*, 2nd ed., Wiley, New York, NY.

Dillman, D.A., Smyth, J.D. and Christian, L.M. (2009), *Internet*, *Mail*, *and Mixed-Mode Surveys: The Tailored Design Method*, 3rd ed., Wiley, New York, NY.

Dommeyer, C.J. and Gross, B.L. (2003), 'What consumers know and what they do: an investigation of consumer knowledge, awareness, and use of privacy protection strategies', *Journal of Interactive Marketing*, Vol. 17, No. 2, pp. 34-51.

Duggan, M. and Smith, A. (2013), 'Social media update 2013', *Pew Research*, available at http://pewinternet.org/Reports/2013/Social-Media-Update.aspx (accessed 20 March 2014).

Ehrenberg, A., Juckes, S., White, K.M. and Walsh, S.P. (2008), 'Personality and self-esteem as predictors of young people's technology use', *CyberPsychology & Behavior*, Vol. 11, No. 6, pp. 739-741.

Fahey, R., Vasconcelos, A.C. and Ellis, D. (2007), 'The impact of rewards within communities of practice: a study of the SAP online global community', *Knowledge Management Research & Practice*, Vol. 5, pp. 186-198.

Fan, W. and Yan, Z. (2010), 'Factors affecting response rates of the web survey: a systematic review', *Computers in Human Behavior*, Vol. 26, No. 2, pp. 132-139.

Fassott, G. (2004), 'CRM tools and their impact on relationship quality and loyalty in e-tailing', *International Journal of Internet Marketing and Advertising*, Vol. 1, No. 4, pp. 331-349.

Fennemore, P., Canhoto, A.I. and Clark, M. (2011), *An Investigation of Existing and Emerging Segmentation Practices in Online Social Media Networks*, The Henley Centre for Customer Management, Reading, UK.

Fitzgerald, L. (2004), 'The influence of social communication networks on intentions to purchase on the web', *International Journal of Internet Marketing and Advertising*, Vol. 1, No. 2, pp. 137-154.

Foster, M.K., Francescucci, A. and West, B.C. (2012), 'Different strokes for different folks: why different user groups participate in online social media', *International Journal of Internet Marketing and Advertising*, Vol. 7, No. 2, pp. 103-119.

Fuller, J., Jawecki, G. and Muhlbacher, H. (2007), 'Innovation creation by online basketball communities', *Journal of Business Research*, Vol. 60, No. 1, pp. 60-71.

Groves, R.M. (2006), 'Nonresponse rates and nonresponse bias in household surveys', *Public Opinion Quarterly*, Vol. 70, No. 5, pp. 646-675.

Guder, F. and Malliaris, M. (2010), 'Online and paper course evaluations', *American Journal of Business Education*, Vol. 3, No. 2, pp. 131-137.

Han, V., Albaum, G., Wiley, J.B. and Thirkell, P. (2009), 'Applying theory to structure respondents' stated motivations for participating in web surveys', *Qualitative Market Research: An International Journal*, Vol. 12, No. 4, pp. 428-442.

Hersberger, J.A., Murray, A.L. and Rioux, K.S. (2007), 'Examining information exchange and virtual communities: an emergent framework', *Online Information Review*, Vol. 31, No. 2, pp. 135-147.

Hsu, C.L. and Lin, J.C.C. (2008), 'Acceptance of blog usage: the roles of technology acceptance, social influence and knowledge sharing motivation', *Information & Management*, Vol. 45, pp. 65-74.

Hsu, M.H., Ju, T.L., Yen, C.H. and Chang, C.M. (2007), 'Knowledge sharing behavior in virtual communities: the relationship between trust, self-efficacy, and outcome expectations', *International Journal of Human-Computer Studies*, Vol. 65, No. 2, pp. 153-169.

Internet World Stats. (2012), 'Top 20 countries with the highest number of internet users', available at http://internetworldstats.com/top20.htm (accessed 8 March 2013).

Ip, R.K.F. and Wagner, C. (2008), 'Weblogging: a study of social computing and its impact on organizations', *Decision Support Systems*, Vol. 45, pp. 242-250.

Ipsos Reid. (2012), 'The Ipsos Canadian inter@ctive Reid report 2012', available at http://www.ipsos.ca/common/dl/pdf/Ipsos_InteractiveReidReport_FactGuide_2012.pdf (accessed 21 December 2012).

Israel, G.D. (2011), 'Strategies for obtaining survey responses from extension clients: exploring the role of e-mail requests', *Journal of Extension*, Vol. 49, No. 3, Article 3FEA7, available at http://www.joe.org/joe/2011june/a7.php (accessed 15 March 2014).

John, O.P. (1990), 'The big five factor taxonomy: dimensions of personality in national language and in questionnaires', in Pervin, L.A. (Ed.), *Handbook of Personality: Theory and Research*, Guilford, New York, NY, pp. 66-100.

John, O.P. and Srivastava, S. (1999), 'The big five trait taxonomy: history, measurement, and theoretical perspectives', in Pervin, L.A. and John, O.P. (Eds.), *Handbook of Personality: Theory and Research*, 2nd ed., Guilford, New York, NY, pp. 102-138.

Jun, M., Hu, J. and Peterson, R.T. (2004), 'A comparison of information searchers and e-shoppers on the perceptions of e-shopping factors: an assessment', *International Journal of Internet Marketing and Advertising*, Vol. 1, No. 2, pp. 204-228.

Kahle, L.R. and Valette-Florence, P. (2012), *Marketplace Lifestyles in an Age of Social Media: Theory and Methods*, M.E. Sharpe, Armonk, NY.

Kankanhalli, A., Tan, B.C.Y. and Wei, K.K. (2005), 'Contributing knowledge to electronic knowledge repositories: an empirical investigation', *MIS Quarterly*, Vol. 29, No. 1, pp. 113-143.

Kashdan, T.B., Rose, P. and Fincham, F.D. (2004), 'Curiosity and exploration: facilitating positive subjective experiences and personal growth opportunities', *Journal of Personality Assessment*, Vol. 82, No. 3, pp. 291-305.

Kim, N., Yu, X. and Schwartz, Z. (2013), 'Can online surveys substitute traditional modes? An error-based comparison of online and onsite tourism destination surveys', *Tourism Review International*, Vol. 17, pp. 31-45.

Kohut, A., Keeter, S., Doherty, C., Dimock, M. and Christian, L. (2012), *Assessing the Representativeness of Public Opinion Surveys*, Pew Research Center, Washington, DC.

Larson, A. (1992), 'Network dyads in entrepreneurial settings: a study of governance of exchange relationships', *Administrative Science Quarterly*, Vol. 37, No. 1, pp. 76-104.

Levin, A., Foster, M.K., Nicholson, M.J., West, B., Hernandez, T. and Cukier, W. (2008), *The Next Digital Divide: Online Social Network Privacy*, Ryerson University, Toronto, Canada.

Li, C. and Bernoff, J. (2008), *Groundswell: Winning in a World Transformed by Social Technologies*, Harvard Business Press, Boston, MA.

Lin, M.J.J., Hung, S.W. and Chen, C.J. (2009), 'Fostering the determinants of knowledge sharing in professional virtual communities', *Computers in Human Behavior*, Vol. 25, pp. 929-939.

Lorenzo-Romero, C., Constantinides, E. and Alarcón-del-Amo, M.d.C. (2012), 'Segmenting the social networking sites users: an empirical study', *International Journal of Internet Marketing and Advertising*, Vol. 7, No. 2, pp. 136-156.

Manfreda, K.L., Bosnjak, M., Berzelak, J., Haas, I. and Vehovar, V. (2008), 'Web surveys versus other survey modes: a meta-analysis comparing response rates', *International Journal of Market Research*, Vol. 50, No. 1, pp. 79-104.

McClelland, D.C. (1987), *Human Motivation*, Cambridge University Press, New York, NY.

McGeeney, K. and Keeter, S. (2014), 'Pew Research increases share of interviews conducted by cellphone', *Pew Research*, available at www.pewresearch.org/fact-tank/2014/01/15/pew-research-increases-share-of-interviews-conducted-by-cellphone (accessed 27 February 2014).

Monroe, M.C. and Adams, D.C. (2012), 'Increasing response rates to web-based surveys', *Journal of Extension*, Vol. 50, No. 6, pp. 6-7.

Nadkarni, A. and Hofmann, S.G. (2012), 'Why do people use Facebook?', *Personality and Individual Differences*, Vol. 52, No. 3, pp. 243-249.

Pagani, M., Hofacker, C.F. and Goldsmith, R.E. (2011), 'The influence of personality on active and passive use of social networking sites', *Psychology and Marketing*, Vol. 28, No. 5, pp. 441-456.

Phelps, J.E., D'Souza, G. and Nowak, G.J. (2001), 'Antecedents and consequences of consumer privacy concerns: an empirical investigation', *Journal of Interactive Marketing*, Vol. 15, No. 4, pp. 2-17.

Rao, S. and Quester, P. (2006), 'Ethical marketing in the internet era: a research agenda', *International Journal of Internet Marketing and Advertising*, Vol. 3, No. 1, pp. 19-34.

Ridings, C.M., Gefen, D. and Arinze, B. (2002), 'Some antecedents and effects of trust in virtual communities', *Journal of Strategic Information Systems*, Vol. 11, No. 3-4, pp. 271-295.

Ross, C., Orr, E.S., Sisic, M., Arseneault, J.M., Simmering, M.G. and Orr, R.R. (2009), 'Personality and motivations associated with Facebook use', *Computers in Human Behavior*, Vol. 25, No. 2, pp. 578-586.

Savage, M. and Burrows, R. (2007), 'The coming crisis of empirical sociology', *Sociology*, Vol. 41. No. 5, pp. 885-889.

Shih, T.H. and Fan, X. (2008), 'Comparing response rates from web and mail surveys: a meta-analysis', *Field Methods*, Vol. 20, No. 3, pp. 249-271.

Sokolowski, K., Schmalt, H.D., Langens, T.A. and Puca, R.M. (2000), 'Assessing achievement, affiliation, and power motives all at once: the multi-motive grid (MMG)', *Journal of Personality Assessment*, Vol. 74, No. 1, pp. 126-145.

Song, J. and Walden, E.A. (2007), 'How consumer perceptions of network size and social interactions influence the intention to adopt peer-to-peer technologies', *International Journal of E-Business Research*, Vol. 3, No. 4, pp. 49-66.

Tybout, A. and Yalch, R.F. (1980), 'The effect of experience: a matter of salience?', *Journal of Consumer Research*, Vol. 6, pp. 406-413.

Usoro, A., Sharratt, M.W., Tsui, E. and Shekhar, S. (2007), 'Trust as an antecedent to knowledge sharing in virtual communities of practice', *Knowledge Management Research & Practice*, Vol. 5, pp. 199-212.

Wang, C.C. and Lai, C.Y. (2006), 'Knowledge contribution in the online virtual community: capability and motivation', *Lecture Notes in Computer Science*, Vol. 4092, pp. 442-453.

Wasko, M.M. and Faraj, S. (2005), 'Why should I share? Examining social capital and knowledge contribution in electronic networks of practice', *MIS Quarterly*, Vol. 29, No. 1, pp. 35-57.

Wu, W.Y. and Sukoco, B.M. (2010), 'Why should I share? Examining consumers' motives and trust on knowledge sharing', *The Journal of Computer Information Systems*, Vol. 50, No. 4, pp. 11-19.

Yoon, S.J. (2002), 'The antecedents and consequences of trust in online-purchase decisions', *Journal of Interactive Marketing*, Vol. 16, No. 2, pp. 47-63.

Youn, S. and Lee, M. (2009), 'The determinants of online security concerns and their influence on e-transactions', *International Journal of Internet Marketing and Advertising*, Vol. 5, No. 3, pp. 194-222.

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