



GLOBAL JOURNAL OF COMPUTER SCIENCE AND TECHNOLOGY
Volume 12 Issue 4 Version 1.0 February 2012
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals Inc. (USA)
Online ISSN: 0975-4172 & Print ISSN: 0975-4350

Facebook Usage by Small and Medium-sized Enterprise: The Role of Domain-Specific Innovativeness

By Chi Bo Wong

Hong Kong Shue Yan University

Abstract - Facebook represents an extremely efficient medium for helping people communicate more efficiently with their friends, families and coworkers. Although Facebook appears to have significant potential for SME marketing, it is not clear if mere personal usage of Facebook by SME owners can lead to commercial usage by the same individuals. Potential for usage of Facebook for SME marketing depends upon Facebook.com understanding the important user characteristics that influence SME owners to adopt this innovative medium for marketing purposes. An empirical study was conducted to investigate the extent to which domain-specific innovativeness explains the conditions under which SME owners move from personal users of Facebook to using Facebook for business purposes. A conceptual model is developed, based on the literature. The model was tested using survey data covering 283 SME owners in Hong Kong. Results of this study, regardless of gender, support the viewpoint that there are significant positive influences of personal usage of Facebook and domain-specific innovativeness on usage of Facebook in business. The results also support the moderating effect of domain-specific innovativeness on the relationship between personal and business usage of Facebook.

Keywords : Facebook, Facebook usage, Domain-specific Innovativeness, Gender, SME

GJCST Classification: H.3.5



FACEBOOK USAGE BY SMALL AND MEDIUM-SIZED ENTERPRISE THE ROLE OF DOMAIN-SPECIFIC INNOVATIVENESS

Strictly as per the compliance and regulations of:



RESEARCH | DIVERSITY | ETHICS

© 2012 Chi Bo Wong. This is a research/review paper, distributed under the terms of the Creative Commons Attribution-Noncommercial 3.0 Unported License <http://creativecommons.org/licenses/by-nc/3.0/>), permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Facebook Usage by Small and Medium-sized Enterprise: The Role of Domain-Specific Innovativeness

Chi Bo WONG

Abstract - Facebook represents an extremely efficient medium for helping people communicate more efficiently with their friends, families and coworkers. Although Facebook appears to have significant potential for SME marketing, it is not clear if mere personal usage of Facebook by SME owners can lead to commercial usage by the same individuals. Potential for usage of Facebook for SME marketing depends upon Facebook.com understanding the important user characteristics that influence SME owners to adopt this innovative medium for marketing purposes. An empirical study was conducted to investigate the extent to which domain-specific innovativeness explains the conditions under which SME owners move from personal users of Facebook to using Facebook for business purposes. A conceptual model is developed, based on the literature. The model was tested using survey data covering 283 SME owners in Hong Kong. Results of this study, regardless of gender, support the viewpoint that there are significant positive influences of personal usage of Facebook and domain-specific innovativeness on usage of Facebook in business. The results also support the moderating effect of domain-specific innovativeness on the relationship between personal and business usage of Facebook.

Keywords : *Facebook, Facebook usage, Domain-specific Innovativeness, Gender, SME*

I. INTRODUCTION

Founded in February 2004, Facebook.com is a social utility that helps people communicate more efficiently with their friends, families and coworkers. The company has developed a platform that facilitates sharing of information through digital mapping of people's real-world social connections. Anyone can sign up for Facebook and interact with people one knows in a trustworthy environment. Facebook has grown exponentially over the last few years, at a rate more rapid than the Internet itself. Facebook has become a household name and the use of Facebook is now a part of everyday life in many parts of the world. There were 800 million active Facebook users at the end of 2011. More than 50 percent of active users log on to Facebook on any given day and an average user has 130 friends (Facebook.com, 2012). The exponential

growth of Facebook can be at least partly explained by the fact that users do not have to pay to use Facebook.

Although the importance of Facebook to small and medium-sized enterprise (SME) is apparent, extant literature has reported little of empirical investigation to explain why some SME owners who are personal users of Facebook (e.g., those who use Facebook for their personal communication, information sharing and information search) are more likely to use this new innovative medium for their businesses, compared with other SME owners. There is no doubt that the future success of Facebook in SMEs depends, to some extent, on whether SME owners as personal users of Facebook also use this innovative medium for their businesses. With an increasing number of SMEs adopting Facebook as a marketing platform, the investigation of Facebook usage in SMEs is of interest to both academics and SME owners. In Hong Kong, a SME is defined as a manufacturing enterprise with fewer than 100 employees and a non-manufacturing enterprise with fewer than 50 employees. As at September 2011, there were about 300,000 SMEs in Hong Kong, accounting for over 98% of the total number of business units, providing jobs to over 1.2 million persons or about 48% of total employment (Hong Kong Trade and Industry Department, 2012).

While personal usage of Facebook may be an important driver influencing SME owners to use Facebook for business, domain-specific innovativeness is also likely to influence usage of Facebook for business, independently and in tandem. The objective of this study is to conceptualize and test empirically a research model that incorporates the main effects of personal usage of Facebook and domain-specific innovativeness in business usage of Facebook, together with the moderating effect of domain-specific innovativeness on the relationship between personal and business usage of Facebook. Such an approach uncovers hitherto neglected effects on business usage of Facebook.

The remainder of the paper proceeds as follows. The next section describes the research model and hypotheses proposed in this study. The third section describes the research methodology used to empirically

Author: Department of Business Administration, Hong Kong Shue Yan University Email: cbwong@hksyu.edu or brianbwong@yahoo.com

test the research model. The fourth section presents the results of data analysis, and the final section discusses research implications and limitations of this study.

II. RESEARCH MODEL AND HYPOTHESES

Based on a review of extant literature (Citrin et al., 2000; Dickerson and Gentry, 1983; Robertson, 1971; Taylor, 1977), a research model which links personal usage of Facebook, domain-specific innovativeness and business usage of Facebook was developed (Figure 1).

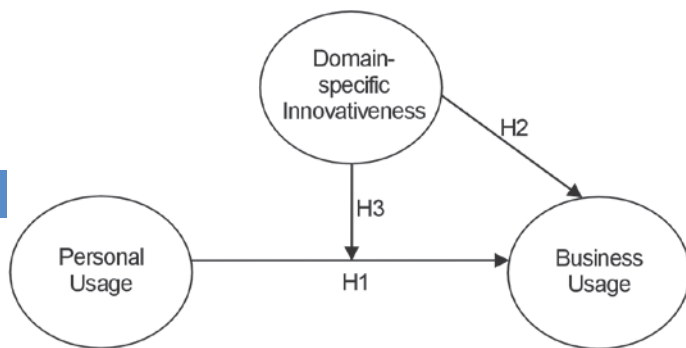


Figure 1: Research Model

The research model has the following two main features.

- First, it examines the main effects of each of the two independent factors (personal usage of Facebook and domain-specific innovativeness) on business usage of Facebook, together with examining the simultaneous influence of personal usage of Facebook and domain-specific innovativeness on business usage of Facebook. Specifically, it is proposed that SME owners using Facebook for personal usage and SME owners with domain-specific innovativeness have a higher propensity to use Facebook their business.
- Second, it is proposed that domain specific innovativeness moderates the relationship between personal usage of Facebook and business usage of Facebook.

a) Personal usage as a driver of business usage

According to numerous studies across different product categories, heavy users within the product category or those with significant experience in comparable product categories have a high tendency to innovate and adopt related new products (e.g., Dickerson and Gentry, 1983; Robertson, 1971; Taylor, 1977). This logical outcome is due to the fact that heavy users of a product acquire the ability or knowledge structure to predict outcomes of closely related products

(Citrin et al., 2000). For instance, Taylor (1977) found a significant positive relationship between usage of a product class and time of adoption of related products. Specifically, Citrin et al. (2000) found that higher levels of prior Internet usage (for purposes other than shopping) result in increased levels of use of the Internet for shopping. Citrin et al. (2000) argued that this is a logical outcome since heavy users of a product have already acquired the ability or knowledge structure to predict outcomes of closely related products. In the context of this study, it is expected that SME owners who use Facebook for personal usage have a higher propensity to adopt Facebook for business. Using the aforementioned literature, the first hypothesis is formulated:

H1: Higher levels of personal usage of Facebook result in increased levels of business usage of Facebook.

b) Domain-specific innovativeness as a driver of adoption of Facebook in business

Innovativeness has received considerable attention from consumer researchers (e.g., Alka et al., 2000; Hirschman, 1980; Midgley and Dowling, 1978; Robertson, 1971; Rogers, 1983). These researchers view innovativeness as a personality construct that is possessed, to a greater or lesser degree, by all individuals, since everyone adopts, in the course of one's life, some objects or ideas that are new in the context of the individual experience. If there were no such characteristics as innovativeness, consumer behavior would consist of a series of routinized buying responses to a static set of products (Hirschman, 1980). Although a number of researchers have used different techniques to define or measure innovativeness, domain-specific innovativeness has been considered as one of the main types of innovativeness (e.g., Citrin et al., 2000; Goldsmith and Hofacker, 1991; Joseph and Vyas, 1984; Rogers and Shoemaker, 1971). Domain-specific innovation reflects the tendency to learn about and adopt innovations within a specific-domain of interest. Citrin et al. (2000) found that increase in domain-specific innovativeness results in increases in consumer adoption of the Internet for shopping. It is, therefore, argued that domain-specific innovativeness may also be an indicator of adoption of Facebook for business purposes. In line with existing research, a second hypothesis is formulated:

H2: Increase in domain-specific innovativeness of Facebook results in increased levels of business usage of Facebook.

c) *Moderating effect of domain-specific innovativeness*

Despite the fact that a large number of people today have access to, and utilize, Facebook for various functions, little research has been conducted to examine why some SME owners who are personal users of the Facebook are more likely to use this new innovative medium for their business purposes than other SME owners. A potential explanation for this situation is offered by Hirschman (1980) who suggested that to transform vicarious adopters into actual adopters of the innovation, actualized innovativeness may need to be present. Citrin et al. (2000) found that the general usage of the Internet (i.e. vicarious adoption) may lead to its usage for commercial purposes (i.e. actual adopters) by consumers who are more innovative. Therefore, in addition to the direct effect of domain-specific innovativeness on business usage of Facebook, it is expected that domain-specific innovativeness also plays a facilitating role whereby SME owners are driven to use the existing innovation (personal usage of Facebook) in a new and novel way to help their business operations (business usage of Facebook). Therefore, the third hypothesis is:

H3: The relationship between personal usage of Facebook and business usage of Facebook is moderated by domain-specific innovativeness

III. RESEARCH METHODOLOGY

a) *Questionnaire design*

An online questionnaire was employed as the means of data collection. Questionnaire items were first written in English. The Chinese version of the questionnaire was then developed by applying Brislin's (1980) recommendation to minimize the problem of lack of equivalence between English and Chinese versions. Specifically, the English version of the questionnaire was first translated into Chinese by a Chinese translator and was then translated back into English by another Chinese translator to check accuracy. When a major inconsistency was observed in the translation, a discussion between two translators was conducted to reconcile the differences. The precise wording of the questionnaire was based on the original English language version and was adjusted such that it was smooth and natural sounding, as well as equivalent, in both languages. Pilot testing the final version of the online questionnaire was conducted with 30 users, who were using Facebook for both personal and business purposes, in order to ensure the appropriateness of questions, wordings, format and structure. To facilitate response, highly structured questions were used in the design of the questionnaire. Those who were using Facebook for both personal and business purposes and aged 18 or above constituted the target population of this study. Participation in this study was voluntary. The

online questionnaire was placed on a free survey server for one month from 7 December 2011 to 6 January 2012. The questionnaire was also submitted to popular free search engines in Hong Kong to request participation in the survey.

b) *Measures*

Personal usage of Facebook, domain-specific innovativeness and business usage of Facebook were all measured using multiple items, on seven-point Likert-type scales. Discussions of each of the three scales used are given below:

- Domain-specific innovativeness: The scales for domain-specific innovativeness were adapted from Goldsmith and Hofacker (1991), but modified in light of our qualitative interviews. The measure has been shown to be internally reliable and free of social desirability bias (Citrin et al., 2000; Goldsmith et al., 1998; Goldsmith and Hofacker, 1991). In this study, domain specific innovativeness scale included six seven-point Likert-type scale items anchored with, "1=strongly disagree" and "7 = strongly agree".
- Personal and business usage of Facebook: No appropriate existing scales were available for personal and business usage of Facebook. Therefore, new scales for the two constructs were developed. In order to understand various uses of the Facebook, qualitative in-depth interviews with 30 users who were using it for both personal and business purposes were conducted. Based on the results of the interviews, Facebook usage activities were found generally similar across different users. In this study, both personal and business usage of Facebook were measured using three seven-point Likert-type scale items anchored with, "1=strongly disagree" and "7=strongly agree".

IV. ANALYSIS AND RESULTS

a) *Response rate*

Facebook service is presently being offered to two sets of users, namely, individual users and business users. This study included SME owners who were using Facebook for both personal and business purposes in Hong Kong. After one month, 283 responses were received. The number of responses was considered to be sufficient for data analysis. As Alreck and Settle (1985) stated, for populations of 10,000 and more, most experienced researchers would probably consider a sample size between 200 and 1,000 respondents. The number of visits to the web page vis-à-vis the number of actual survey responses was not monitored. Though the response rate was acceptable, non-response bias (Armstrong and Overton, 1977) was also tested. Specifically, we divided respondents into two groups,

namely, early and late respondents, in order to compare mean values for the three constructs for the two groups. It was assumed that late respondents were likely to be similar to non-respondents. The results of this analysis showed no significant differences between the two groups at the 0.05 confidence level for any of the three constructs, confirming absence of any significant non-response bias.

b) Construct validity and reliability analysis

Unidimensionality of each construct was assessed by principal components factor analysis with varimax rotation. Dimensions with eigenvalues of 1 or above were retained. The factors are interpreted by naming them based on the size of the loadings. As seen in Table 1, three factors emerged; domain-specific innovativeness, business usage of Facebook and personal usage of Facebook. These results confirmed that the previously validated construct of

domain-specific innovativeness is unidimensional, factually distinct and applicable in Facebook setting (Goldsmith and Hofacker, 1991).

The proportion of variance accounted for by each of the rotated factors is frequently considered in literature to be indicative of the relative importance of each factor. As reported in Table 1, the domain-specific innovativeness (DSI) factor, business usage of Facebook (BU) factor and personal usage of Facebook (PU) factor accounted for 40.840%, 22.535% and 19.911%, respectively, of variance of the twelve variables. In total, the three factors accounted for 83.287% of the total variance. Internal consistency tests were also conducted using Cronbach alpha tests. Alpha values for DSI, BU and PU scales are 0.955, 0.884 and 0.931, respectively. Since the coefficient alpha of each scale is above the acceptable value of 0.700, all three scales are considered to be reliable (Nunnally, 1978).

Table 1: Scale Items and Factor Analysis

| | Scale Items | Factor Loadings |
|---|---|-----------------|
| <i>Domain-specific innovativeness(DSI) (eigenvalue=4.901, variance=40.840, alpha=0.955)</i> | | |
| DSI1 | In general, I am among the last of SME owners to use a new Facebook function for my business purposes. ^a | 0.866 |
| DSI2 | If I heard that a new Facebook function was available, I would be interested enough to use it for my business purposes. | 0.897 |
| DSI3 | Compared to other SME owners, I seek out relatively little information over the Facebook for my business purposes. ^a | 0.923 |
| DSI4 | In general, I am the last among SME owners to know the newest Facebook functions for business purposes. ^a | 0.876 |
| DSI5 | I will consider using a new Facebook function for my business purposes, even if I have not heard of it yet. | 0.883 |
| DSI6 | I know more about new Facebook functions for business purposes than other SME owners do. | 0.878 |
| <i>Business Usage (BU) (eigenvalue=2.704, variance=22.535, alpha=0.884)</i> | | |
| BU1 | I made good use of Facebook functions to communicate with my friends, family and coworkers over the last 12 months. | 0.748 |
| BU2 | I made good use of Facebook functions to share information with my friends, family and coworkers over the last 12 months. | 0.880 |
| BU3 | I made good use of Facebook functions to search information of my friends, family and coworkers over the last 12 months. | 0.855 |
| <i>Personal usage (PU) (eigenvalue=2.389, variance=19.911, alpha=0.931)</i> | | |
| PU1 | I made good use of Facebook functions to communicate with my customers over the last 12 months. | 0.901 |
| PU2 | I made good use of Facebook functions to share information with my customers over the last 12 months. | 0.919 |
| PU3 | I made good use of Facebook functions to search information of my customers over the last 12 months. | 0.912 |

Notes ^a Indicates that items were reverse coded

a) Hypothesis Testing

For checking the extent of the actual departure from normality, of each construct, values of skewness and kurtosis of the three constructs were computed. As all values of skewness and kurtosis of the three factors were found to be within acceptable limits of ± 1 , the data obtained from the three constructs did not show deviations from normality (Hair et al., 1998).

Hierarchical regression analysis was used to test the three hypotheses formulated in this study. Independent factors were entered in order to test the direct and simultaneous influences of the two independent factors on the dependent factor. In Model 1, personal usage was entered into the model to test the simple effect of personal usage on business usage. In Model 2, domain-specific innovativeness was entered into the model to test the simultaneous influence of personal usage and domain-specific innovativeness on business usage. In Model three, the interaction factor was entered into the model to test for any significant moderating effect of domain-specific innovativeness on

the relationship between personal usage and business usage.

Table 2 shows that the initial model (Model 1) contained the simple effect of personal usage on business usage and had an adjusted R^2 value of 0.243, indicating that 24.3% of the variance in business usage could be explained by the personal usage. In Model 2, domain-specific innovativeness was added to the model to examine the main effects of both independent factors acting together. This resulted in the adjusted R^2 value increasing to 40.5%, which was statistically significant (F change = 65.376, $p < 0.01$). Finally, the interaction factor was added to the model. As shown in Model 3, this addition resulted in a further increase in the adjusted R^2 value to 42.2%, which was statistically significant (F change = 7.704, $p < 0.01$). Indeed, while the marginal increases in R^2 values were not necessarily of large magnitude, Model 3 explains the highest variance in the dependent factor and is the best model derived in this research (Figure 2).

Table 2: Results of Hierarchical Regression Analysis

| Independent Factor | Model 1 | Model 2 | Model 3 |
|--------------------------------------|---------|---------|---------|
| Personal usage (PU) | 0.496* | 0.470* | 0.776* |
| Domain-specific innovativeness (DSI) | | 0.406* | 0.655* |
| PU by DSI | | | 0.429* |
| R^2 | 0.246 | 0.410 | 0.429 |
| Adjusted R^2 | 0.243 | 0.405 | 0.422 |
| F | 77.114* | 65.376* | 7.704* |

Note:

* Significant at $p < 0.01$

Dependent factor: Business usage (BU)

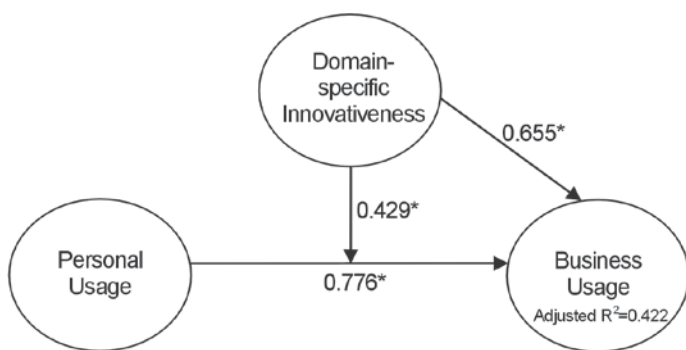


Figure 2: Results of Research Model

Results of Model 3 show that the main effects of personal usage ($\beta = 0.776$, $p < 0.01$) and domain-specific innovativeness ($\beta = 0.655$, $p < 0.01$) are all significant and positive, thus confirming hypotheses H1 and H2. These results also indicate that personal usage is a stronger driver of business usage than

domain-specific innovativeness ($\beta_{PU} = 0.776 > \beta_{DSI} = 0.655$). Indeed, this finding is also supported by Model 2 in which the main effects of only personal usage and domain-specific innovativeness were examined ($\beta_{PU} = 0.470 > \beta_{DSI} = 0.406$).

Model 3 provides evidence in support of H3. Specifically, the moderating effect of domain-specific innovativeness on the relationship between personal usage and business usage is significant and positive ($\beta = 0.429$, $p < 0.01$). As illustrated by Aiken and West (1991), the positive sign indicates that higher the level of domain-specific innovativeness, the greater the slope of business usage on personal usage. This shows that as stated in H3, domain-specific innovativeness acts as a complement to personal usage, further strengthening business usage. Thus, in the absence of domain-specific innovativeness, the impact of personal usage on business usage is likely to be lower.

d) Additional Analysis

Although past research has identified various

factors that influence Internet use, a number of studies tend to treat Internet users as homogeneous entities in which distinctions of gender are either ignored or considered irrelevant (e.g., Citrin et al., 2000). Hence, it is worthwhile to test if the three hypotheses, supported by the overall results, are also supported for male and female segments. As shown in Table 3, 55.9% of respondents were male while 44.1% were female.

Results in Table 3 show that the main effects of personal usage and domain-specific innovativeness are all significant and positive for both male and female segments, thus further confirming Hypotheses H1 and

H2. Consistent with overall respondents, these results also indicate that personal usage is a stronger driver of business usage than domain-specific innovativeness for both males and females. Also, it is interesting to note that domain-specific innovativeness plays a significant moderating effect on the personal usage–business usage link for both males and females, thus further confirming Hypothesis H3. Thus, regardless of gender, it can be said that domain-specific innovativeness plays a critical facilitating role to drive a personal user to become business user.

Table 3: Results of Straightforward Regression Analysis by Gender

| Independent factor | Male | Female |
|--------------------------------------|---------|---------|
| Personal usage (PU) | 0.821 * | 0.829 * |
| Domain-specific innovativeness (DSI) | 0.634 * | 0.757 * |
| PU by DSI | 0.406 * | 0.613 * |
| Segment Size (%) | 55.9 | 44.1 |
| R^2 | 0.542 | 0.313 |
| Adjusted R^2 | 0.532 | 0.293 |
| F | 3.997 * | 6.519 * |

Notes:

* Significant at $p < 0.01$

Dependent factor: Business usage (BU)

V. CONCLUSION

a) Summary of research findings

While the main effects of personal usage of Facebook and domain-specific innovativeness on business usage of Facebook are quite apparent, and have indeed been supported in the existing literature, their interaction effects have rarely been examined. The objective of this study was to gain an understanding of the factors that move SME owners from being personal users to adopters of Facebook for their businesses. According to the regression results (Table 2 and 3), there are two key findings of this study, regardless of gender. First, personal usage and domain-specific innovativeness have a direct influence on business usage. Secondly, there is a significant moderating effect of domain-specific innovativeness on the relationship between personal usage and business usage. This result underlines the importance of considering the SME owner's domain-specific innovativeness when trying to understand and predict the propensity to adopt Facebook for communication, information sharing and searching information for business purposes in relationship to their personal usage of Facebook.

b) Implications of this research

With the increasing pervasiveness of Facebook

usage in SMEs, it has become increasingly crucial to gain a better understanding of factors influencing business usage of Facebook. The findings of this study are expected not only to enhance the understanding of the influence of personal usage of Facebook and domain-specific innovativeness on business usage of Facebook by SME owners, but also provide some parameters to guide future development of theory and allow the results of this study to be generalized to other Internet-based services readily. Facebook.com may consider nurturing and developing domain-specific (Facebook-related) innovativeness among SMEs owners. This may be possible by creating Facebook sites that facilitate and reward exploration and thereby influence SME owners to become more domain-specific innovative, which, according to the findings of this study, may lead them to use Facebook for their businesses.

c) Limitations and future research

Although this study provides interesting insights into factors affecting Facebook usage by SMEs in Hong Kong, the results must be interpreted with caution. Based on analysis of the overall analysis, both personal usage and domain-specific innovativeness factors explained only 42.2 percent of the variance in business usage (Figure 2). Since more than 57 percent of the variance is unexplained, there is need for additional

research incorporating potential variables that were not measured in this study. Furthermore, the fact that this research only collected data from SME owners in Hong Kong, it can be assumed that almost all respondents are Hong Kong Chinese and presumably live in Hong Kong. This may have caused selection bias in the findings. These respondents may possess specific cultural characteristics that limit generalization of the findings of this study to other populations. While it is not obvious that the findings are sensitive to geographic location, future research can address this by replicating this study with samples from different regions in the world.

REFERENCES RÉFÉRENCES REFERENCIAS

1. Citrin, AV, Sprott, DE, Silverman, SN & Stem, DE 2000, 'Adoption of Internet shopping: the role of consumer innovativeness', *Industrial Management and Data Systems*, vol. 100, no. 7, pp. 294-300.
2. Alreck, P & Settle, R 1985, *The survey research handbook*, Irwin, US.
3. Armstrong, JC & Overton, TS 1977, 'Estimating non-response bias in mail surveys', *Journal of Marketing Research*, vol. 14, no. 3, pp. 396-402.
4. Bass, FM 1969, 'A new product growth model for consumer durables', *Management Science*, vol. 15 no. 5, pp. 215-227.
5. Brislin, RW 1980, 'Translation and content analysis of oral and written materials', in H.C. Triandis & J.H. Berry (eds.), *Handbook of Cross-Cultural Psychology Methodology* (vol. 2), Allyn and Bacon, Inc, Boston.
6. Craig, SC & Ginter, JL 1975, 'An empirical test of a scale for innovativeness', in Schlinger, M.J. (eds.), *Advances in Consumer Research*, (vol. 2), Chicago Association for Consumer Research, Chicago, IL, pp. 555-562.
7. Dickerson, MD & Gentry, JW 1983, 'Characteristics of adopters and non-adopters of home computers', *Journal of Consumer Research*, vol. 10, September, pp. 225-235.
8. Facebook.com 2012, Statistical Press Release (online), Retrieved: 12 January 2012, from <http://www.facebook.com/press/info.php?statistics>.
9. Gatignon, H & Robertson, TS 1985, 'A propositional inventory for new diffusion research', *Journal of Consumer Research*, vol. 1, March, pp. 849-867.
10. Goldsmith, RE & Hofacker, CF 1991, 'Measuring consumer innovativeness', *Journal of the Academy of Marketing Science*, vol. 19, no. 3, pp. 209-221.
11. Hirschman, EC 1980, 'Innovativeness, novelty seeking, and consumer creativity', *Journal of Consumer Research*, vol. 7, December, pp. 283-295.
12. Hong Kong Trade and Industry Department 2012, Statistical Press Release (online), Retrieved: 12 January 2012, from http://www.success.tid.gov.hk/english/lin_sup_org/gov_dep/service_detail_6863.html.
13. Joseph, B & Vyas, SJ 1984, 'Concurrent validity of a measure of innovative cognitive style', *Journal of the Academy of Marketing Sciences*, vol. 12, no. 2, pp.159-175.
14. Midgley, DF & Dowling, GR 1978, 'Innovativeness: the concept and its measurement', *Journal of Consumer Research*, vol. 4, pp. 229-42.
15. Nunnally, JC 1978, *Psychometric Theory*, vol. 2, New York: McGraw-Hill.
16. Robertson, TS 1971, *Innovative Behavior and Communication*, Holt, Rinehart and Winston, New York, NY.
17. Rogers, EM 1983, *Diffusion of Innovations*, The Free Press, New York, NY.
18. Rogers, EM & Shoemaker, F.F. 1971, *Communication of Innovations*, The Free Press, New York, NY.
19. Schiesel, S 1997, 'Payoff still elusive on Internet gold rush', *The New York Times*, January 2, C17.
20. Taylor, JW 1977, 'A striking characteristic of innovators', *Journal of Marketing Research*, vol. 14, pp. 104-7.