

# CHALLENGES FACED BY INDIAN MSMEs IN ADOPTION OF INTERNET MARKETING AND E-COMMERCE

**Vidit Mohan, Indian Institute of Management**  
**Salman Ali, Indian Institute of Management**

## ABSTRACT

*This paper report findings from a study that researched challenges faced by Indian MSMEs (Micro, Small, and Medium Enterprises) in the adoption of internet marketing and e-commerce. Qualitative interviews amongst a dozen firms were followed up by a survey amongst over a hundred MSMEs operating in India. Responses from the interviews and the survey helped in the identification of some of the major challenges and barriers faced by Indian MSMEs over the adoption of internet marketing and e-commerce for their businesses. Being among the first studies that capture the key elements and issues with the adoption of internet marketing and e-commerce by MSMEs in the Indian context, this study, apart from its contribution to research and for practitioners, also bears suggestive implications for policymakers on supportive actions to integrate MSMEs to mainstream internet market and e-commerce.*

**Keywords:** Internet Marketing; E-Commerce; MSMEs (Micro, Small and Medium Enterprises); India.

## INTRODUCTION

MSMEs in India plays an indispensable role in the economic development of the nation through contribution to the manufacturing output, increasing foreign exchange earnings, provision of employment opportunities, exports, and promoting balanced economic development (Mohan & Ali, 2018). India has about 36 million MSMEs providing about 80 million employment opportunities, contributing to about 8% of the gross domestic product (GDP) and about 33% of total manufacturing output (Ministry of Micro, Small and Medium Enterprises, 2018).

Indian MSMEs are witnessing an extremely dynamic and multi-faceted business scenario (Jena & Thatte, 2018). The increasingly complex cost structures and an insistent quest of delivering high customer satisfaction are necessitating the adoption of ICT (Information Communication Technology) tools including the adoption of internet marketing and e-commerce to sustain in the present scenario where competition is increasingly becoming global, especially due to the influx of imports from neighboring China.

Though there have been studies on usage and challenges in adoption of ICTs amongst MSMEs in different economic contexts (Giotopoulos et al., 2017; Gono et al., 2008; Osorio-Gallego et al., 2016; Perez-Soltero et al., 2017; Suhartanto & Leo, 2018), challenges faced by Indian MSMEs on adoption of ICTs especially internet marketing and e-commerce has not received enough attention in the literature. This study tried to address this gap by conducting primary research among owners of Indian MSMEs, firstly by conducting semi-structured interviews amongst a dozen MSME owners and that was later followed up by a survey amongst

over a hundred MSME owners. The study investigated the opportunities, challenges and barriers faced by MSMEs in India over the adoption of internet marketing and e-commerce channels.

The focus of this study is on the identification of the key determinants which affect the adoption of internet marketing channels for the MSMEs. The study also identifies the prominent marketing channels deployed by these businesses in the Indian scenario. The major issues with the transition to the internet marketing channels were thereafter investigated to generate an understanding about the digital challenges pertinent to the Indian MSMEs. The implications from the findings were drawn to understand the digital marketing practices of the MSMEs.

This study establishes a basis to infer the challenges faced by Indian MSMEs in the adoption of internet marketing and e-commerce, which can be developed further by future researchers. The findings can be used by MSME owners to develop a suitable marketing communication mix for MSMEs operating in different sectors. The study also bears suggestive implications for policy-makers on how and where to support MSMEs to integrate them to the mainstream internet and e-commerce sphere as it points out the various challenges faced by MSMEs, some of which can be addressed from an institutional level.

## LITERATURE REVIEW

Though MSMEs are generally laggards in technological and management capabilities (Caldeira & Ward, 2002), the rapid growth of ICTs (Information and Communication Technologies) in recent times has opened up a platform for MSMEs to reach out to customers on a global scale (Neirotti et al., 2018). ICT and e-commerce characterize the means to innovate in business processes and as a mode of communication amongst the stakeholders of the organization (Narayanasamy et al., 2008) and the adoption of it can significantly contribute to the growth of MSMEs (Hepworth & Ryan, 2000; Tan et al., 2009).

ICT involves the application of the internet and other digital technologies used for capturing, storage and processing of information (Duncombe & Heeks, 2002). Internet marketing is emerging as a promising tool for customer-focused marketing efforts to acquire, maintain and grow relationships with customers and other stakeholders (Shin, 2001). In most cases, it complements with other traditional communication modes to develop an adequate multi-channel marketing strategy. The key for deployment of a marketing mix for an enterprise is to generate awareness among target customers, enhancing customer knowledge about the product or service, building the brand equity and company image to gain customer loyalty (Mbuyisa & Leonard, 2017). ICT enables firms to process customer information and to analyze target customer segments (Zhang et al., 2008).

The deployment of the ICT tools and applications in the business processes would help improve the competitiveness of MSMEs in national and international markets. This requires the identification of the target customer clusters, development of skills in the ICT tools, developing the e-readiness infrastructure and the customization of ICT applications and solutions as per the needs of individual MSMEs (Scupola, 2003). ICT helps in successful implementation of a planned and targeted promotion which can aid the growth of the enterprise and helps retain customers for the future payoff (Sunday & Vera, 2018).

The need for internet marketing for MSMEs arises from the fact that customer acquisition and retention is largely determined through consistent interaction and promotions (Neirotti et al., 2018). This necessitates the integration and coordination of diverse communication channels in the target market, thereby helping customers in screening organizations and products (Nowak & Phelps, 1994). It thus enables an organization to build a brand identity in the market through reinforcement of its product value at each contact point with its customers. The aim of such

promotions is to ensure that customers retain the critical information about the product or service. These factors are crucial to help promote sales through brand awareness, liking and information. Though promotion may not yield immediate positive results or the attainment of the anticipated results in the short-term, it is important to stay focused on delivery of a clear message to help generate customer awareness which has the potential to pay off in the medium-longer term (Moriarty, 1994).

The adoption of marketing mix plays a crucial role to develop and maintain close relationships with customers and stakeholders. It helps to identify the needs of customers, thereby aiding enterprises to develop better customer-valued products and services. It also extends to the growth of the internal resources of the organization, thereby improving its performance in terms of organizational infrastructure development, strategic planning and identification of target markets and interactivity with the customers (Reid, 2003).

Having a successful marketing mix, including adopting of internet marketing and e-commerce comes with several associated benefits to MSMEs, few of which are: introduction of products or services in the global market, identification and understanding of global standards, e-commerce platform for products and services, price and product customization to target potential customers and acquiring the core competencies and skills required in global market positioning (Low, 2000).

The drivers for ICT usage and adoption amongst the MSMEs can be broadly be classified as: business-related factors resulting from external competition, organizational capabilities and know-how and financial soundness of the firm; and technology-related factors which includes the IT infrastructure (Wymer & Regan, 2005). Both internal and external factors contribute toward the adoption of ICTs (Beatty et al., 2001; Molla & Licker, 2005). The adoption of ICT channels, especially internet marketing, by MSMEs is often marred by several factors related to the lack of necessary resources, lack of awareness or knowledge, or financial constraints (Asare et al., 2012; Nikolopoulos & Dana, 2017).

We based our research by incorporating the role of regional dynamics and processes relevant to the Indian scenario, not just to identify the drivers of adoption, but also to understand the major challenges in adoption for Indian MSMEs.

## METHODS

The fundamental queries in our study were revolved around: (1) What are the various types of marketing tools used by MSMEs in India; (2) What factors are responsible for facilitation of internet marketing and e-commerce amongst Indian MSMEs; (3) What are the major impediments or challenges faced by Indian MSMEs in the adoption of internet marketing and e-commerce channels.

We adopted a descriptive research methodology to answer the above research questions through a cross-sectional study of MSMEs with respect to ICT. It is aimed at the identification and description of the present state of the Indian MSMEs in the internet and e-commerce domain.

To shortlist firms for our research, we went through the databases provided by the Indian Chamber of Commerce as well as MSME Development Institutes of various Tier I and Tier II cities in India. In the first stage of the study, we undertook a series of comprehensive, face-to-face, semi-structured interviews with a dozen MSME managers/owners to better conceptualize the issue. The interviews were based on the premises of capturing the various factors that influence the adoption of internet marketing and e-commerce by MSMEs. Convenience sampling was done at this stage based on the requisite participant characteristics and based on the

participant's willingness to cooperate (Danneels, 2010). The interviews were recorded and later transcribed to identify patterns amongst the responses of the participants (Eisenhardt, 1989; Yin, 2009).

Based on the responses from interviews, a survey questionnaire was designed and administered among the owners of over a hundred MSMEs operating in India. These questions were primarily related to the types of the marketing mix employed by the business owners, the skills required for adopting internet marketing and e-commerce and the different challenges related to the adoption of those channels.

## FINDINGS

### Qualitative Interviews

The respondent's experiences and perceptions with internet marketing and e-commerce were captured through qualitative interviews with a dozen MSME owners.

*"We can't do everything", explained one interviewee. "We have to be really focused and specific in the utilization of resources, be it the capital or people".*

One of the respondents recognized these concerns by noting: *"One of the most important things that stop us from utilizing the internet marketing platforms for promotions is a lack of proper knowledge and the understanding of the associated marketing channels."*

One of the employees in the marketing domain of an automobile parts and accessories manufacturing firm, acknowledged: *"The formulation and implementation of ICT requires (a) cross-functional involvement, (b) adoption of latest information technology practices and (c) understanding the key constituents of internet marketing to target the key customer segments. However, for the time being, we are actually not adept at each of these aspects."*

Another respondent of a customer service firm believed that: *"Deviating from our traditional marketing means is tricky for our company and to a large extent is not required due to the lack of clarity about the magnitude of its impact on business or sales."*

One of the employees of a packaged snack manufacturing firm recalled, *"A few years back, we spent a huge amount of money in order to achieve higher customer reach, however, these are false earnings."*

The owner of a firm engaged in providing factory solutions for plastic companies described his insistence on the change, *"Benefits realization from ICTs is small at present but indeed form a growing part of our revenue. What we essentially require is a means to cluster activities of various marketing channels to maximize the synergies between them."*

In the words of another respondent, *"The cost-consciousness and the long-term relationships with our clients allow us to keep things informal. The resources are limited and are deployed as required to address the most pressing issues of the organization."*

To summarize, some of the major challenges faced by MSMEs in the adoption of internet marketing and e-commerce identified from the interviews were:

1. Lack of adequate awareness and skills
2. Financial constraints and budgetary restrictions
3. Quality of products or services
4. Lack of adequate technical resources
5. Security concerns

## Survey

Following are the major findings from the survey administered amongst over a hundred MSME owners.

### Tools used for promotions

Table 1 presents the dominant marketing tools used by MSMEs to enhance their popularity and growth. The findings in Table 1 indicate that advertising is preferred by 31 respondents (29.52 percent), while discount sales are favored by 28 (26.67 percent). Pamphlet and personal retail constitute the remaining portions with 21.9 percent each. The Indian MSMEs are also found to be relying on more than one mode of promotion at a single point of time. Efforts have been made in this regard to capture the most relevant tool with respect to each of the surveyed firm. There are also variations in the appropriateness of the preferred means of promotion across the different points of time in a year.

<b>Tools</b>	<b>Respondents</b>	<b>% of Respondents</b>
Advertising	31	29.52%
Discount Sale	28	26.67%
Pamphlet	23	21.90%
Retailing	23	21.90%
Total	105	

### Skills and Knowledge Deficiencies Related to Internet Marketing and E-Commerce

Table 2 presents the deficiencies faced by MSMEs on the skills and knowledge required to adopt internet marketing and e-commerce. Lack of awareness was indicated by 41 (39.05 percent) respondents as the most significant problem. This is followed by the belief that these channels are not required (32.38 percent) and then lack of skills and experience (28.57 percent). There are also some minor factors, such as, linguistic constraints, biases towards technology, etc. One important aspect that emerges from these findings is the need for engagement programs for the MSMEs. These engagements could be served as a focused groups to gauge the importance of the internet marketing and e-commerce for the small businesses in the light of the emerging global competition.

<b>Knowledge</b>	<b>Respondents</b>	<b>Percentage</b>
Lack of awareness	41	39.05%
Not required	34	32.38%
Lack of skills and experience	30	28.57%
Total	105	

### Major Challenges Affecting Usage of Internet Marketing and E-Commerce

Table 3 reflects the major challenges faced by MSMEs on the usage of internet marketing and e-commerce. 37 respondents (35.24 percent) felt the threat of market competition as the major challenging factor that affects the use of internet marketing and e-commerce by MSMEs. The next most important factor was macroeconomic issues indicated by 34 respondents (32.38 percent), followed by financial (24.76 percent) and infrastructure (7.62 percent) problems. The MSMEs are often engaged in completion with their local counterparts. This acts as a deterrent for them to focus on expanding their customer base through internet and e-commerce channels. The market competition is also associated with counterfeit products as an ancillary factor. The availability of cheaper products of par or sub-par quality may discourage customers from buying genuine products. The MSMEs in India are often faced with the issue of the availability of finances. These financial gaps arise due to the lack of collaterals for the obtaining bank loans, together with high cost associated with the other means of systematic credit. The major funding for undertaking an expansion or promotion activities is often obtained through unorganized sources of capital, which can severely affect the long-term profitability of the Indian MSMEs.

<b>Factors</b>	<b>Respondents</b>	<b>% of Respondents</b>
Market Competition	37	35.24%
Financial/Capital	26	24.76%
Macroeconomic Factors	34	32.38%
Infrastructure	8	7.62%
Total	105	

## DISCUSSIONS

Some of the findings from the study resonate with similar studies in other markets. For instance, challenges such as financial constraints are universally found in countries such as in the United States (Beatty et al., 2001), Italy (Lucchetti & Sterlacchini, 2004), Malaysia (Tan et al., 2009), United Kingdom (Harindranath & Dyerson, 2008), etc. There are region-specific factors too (Arendt, 2008; Rouibah et al., 2009). Issues such as security and reliability concerns are more predominantly found in developing economies (Aljifri et al., 2003; Osorio-Gallego et al., 2016).

Several characteristics of Indian MSMEs warrant attention if we were to appreciate the challenges they faced in the adoption of internet marketing and e-commerce channels. Firstly, the structural characteristics of the MSMEs play an important role in the existence of a communication strategy. MSMEs are small by their nature, with the majority of them being owned by individuals or families. They are subject to internal as well as external constraints with regards to their development and growth. Internal issues include lack of competent personnel, limited availability of capital, lack of technological competitiveness to adopt ICTs, etc. External factors include market forces such as demand fluctuations, macroeconomic and political factors, export issues, etc. Our study revealed that majority of the Indian MSME owners are not convinced about the need for internet marketing and e-commerce for their businesses. Similar results have been observed in other emerging economies as well (Rouibah et al., 2009). This could be broadly attributed to either a lack of awareness about the potential benefits, lack of resources, the presence of external factors or a combination of these factors (Arendt, 2008). There is also no holistic communication program for firms in most of the cases and little effort is

put into implementing the same. This highlights the limited success of the MSMEs in appreciating the significance of the ICTs to have a positive impact on their customers. The use of ICTs thus is based on objectives and interest of specific organizations, particularly that of the management/owners.

The second characteristic among the respondents emerges in terms of primary drivers related to the adoption of internet marketing as a means to brand relationship management. These drivers are essentially related to the attainment of high customer interaction level through feedbacks, achieving strategic consistency across the various functional levels and development of cross-functional competencies. MSMEs often prefer to concentrate their investments in communication to only a single type of communication, as they deploy specific communication modes in pursuit of achieving higher visibility in the focused marketplace to enhance interpersonal relationships. Communication in such cases are often technical and are linked to the behavior of its competitors.

The third characteristic is about their internal structure and communication processes. MSMEs deploying multiple communication modes often have issues related to formalization of decisions. This is related to a lack of inter-functional involvement, awareness, financial and budgetary constraints, etc. Thus, the firms often define their budget with respect to the selected communication activity to be adopted. MSMEs with large profitability and revenues often prefer multiple modes of communication. In other words, the adoption of intensive communication strategy could be attributed to higher revenues and internal dynamics.

## CONCLUSIONS

Use of internet marketing and e-commerce could serve as a key enabler to gain a competitive advantage in terms of differentiation through an improved product and service delivery, or a lowered cost. It can play a critical role to help reshape the business models of MSMEs by improving their competitive dynamics. Presently, the low demand from Indian MSMEs for internet marketing and e-commerce has limited the offerings of products and services tailored to suit the needs of individual MSMEs in the market. This is attributable to a lack of dynamism between the firms offering internet marketing services and MSMEs in the Indian scenario. There is a gap in demand and supply which limits the MSMEs to adopt internet marketing and e-commerce channels. Hence, we suggest that the government and the industry should work together to facilitate the spread of ICT awareness and related skill development in the MSME sector.

This study thus bears implications for policymakers. By judiciously using mechanisms and incentives available at their disposal, policymakers should work together with MSMEs to alleviate some of the major challenges faced by MSMEs in the adoption of internet marketing and e-commerce. This would not just help in the domestic businesses of MSMEs, but also in their global outreach, both contributing toward larger economic prospects of the economy.

This study also provides a means for practitioners and MSME owners to examine their organizational practices with other small-and medium-sized firms. The challenges in the adoption of internet marketing and e-commerce need to be properly assessed in the light of distinctive organizational culture and design. Amongst others, the absence of adequate skills and know-how was identified as one of the key challenges for MSMEs in their adoption of internet marketing and e-commerce for their businesses. Hence, we suggest that managers/owners of MSMEs should invest adequately in skill development/acquisition to successfully achieve commercialization and marketing of their enterprises over internet and digital channels.

Being amongst the novel studies on the challenges faced by Indian MSMEs in adopting internet marketing and e-commerce, this study sets a foundation for future researchers to delve into deeper questions. We also suggest similar studies to be replicated in different contexts to contrast and relate what all challenges faced by Indian MSMEs are universal and/or unique to the larger institutional context.

One of the limitations of the study is the relatively small sample size of respondents in the study that can possibly limit the generalizability of the findings. However, as we've followed a two-step process, i.e. an initial round of qualitative interviews was followed by a survey study; we achieved some sort of triangulation within the study itself. We recommend future scholars to investigate similar questions with a larger dataset.

## REFERENCES

- Aljifri, H. A., Pons, A., & Collins, D. (2003). Global e-commerce: a framework for understanding and overcoming the trust barrier. *Information Management & Computer Security*, 11(3), 130-138.
- Arendt, L. (2008). Barriers to ICT adoption in SMEs: how to bridge the digital divide? *Journal of Systems and Information Technology*, 10(2), 93-108.
- Asare, S. D., Gopolang, B., & Mogothwane, O. (2012). Challenges facing SMEs in the adoption of ICT in B2B and B2C E-commerce: A comparative case study of Botswana and Ghana. *International Journal of Commerce & Management*, 22(4), 272-285.
- Beatty, R. C., Shim, J., & Jones, M. C. (2001). Factors influencing corporate website adoption: A time-based assessment. *Information & Management*, 38(6), 337-354.
- Caldeira, M., & Ward, J. M. (2002). Understanding the Successful Adoption and Use of IS/IT in SMEs: An Explanation from Portuguese Manufacturing Industries. *Information Systems Journal*, 12, 121-152.
- Danneels, E. (2010). Trying to become a different type of company: Dynamic capability at Smith Corona. *Strategic Management Journal*, 32(1), 1-31.
- Duncombe, R., & Heeks, R. (2002). Enterprise Across the Digital Divide: Information Systems and Rural Microenterprise in Botswana. *Journal of International Development*, 14, 61-74.
- Eisenhardt, K. M. (1989). Building Theories from Case Study Research. *Academy of Management Review*, 14(4), 532-550.
- Giotopoulos, I., Kontolaimou, A., Korra, E., & Tsakanikas, A. (2017). What Drives ICT Adoption by SMEs? Evidence from a Large-scale Survey in Greece. *Journal of Business Research*, 81, 60-69.
- Gono, S., Harindranath, G., & Berna Özcan, G. (n.d.). The Adoption and Impact of ICT in South African SMEs. *Strategic Change*, 25(6), 717-734.
- Harindranath, G., & Dyerson, R. B. (2008). ICT Adoption and Use in UK SMEs: a Failure of Initiatives? *Electronic Journal of Information Systems Evaluation*, 11(2), 91-96.
- Hepworth, M., & Ryan, J. (2000). Small firms in Europe's developing information society. In K. Ducatel, J. Webster, & W. Herrmann, *The Information Society in Europe. Work and Life in an Age of Globalization* (pp. 73-96). Lanham, Md: Rowman & Littlef.
- Jena, N. R., & Thatte, L. R. (2018). Performance of the Micro, Small And Medium Enterprises (MSMEs) Manufacturing Sector in Select States in India: The Concept of MSME Manufacturing Business Facilitator (MSME-MBF) Index. *Academy of Entrepreneurship Journal*, 24(1), 1-22.
- Low, G. S. (2000). Correlates of Integrated Marketing Communications. *Journal of Advertising Research*, 40(3), 27-39.
- Lucchetti, R., & Sterlacchini, A. (2004). The adoption of ICT among SMEs: Evidence from an Italian survey. *Small Business Economics*, 23(2), 151-168.
- Mbuyisa, B., & Leonard, A. (2017). The Role of ICT Use in SMEs Towards Poverty Reduction: A Systematic Literature Review. *Journal of International Development*, 29(2), 159-197.
- Ministry of Micro, Small and Medium Enterprises. (2018). *MSME Annual Report 2017-18*. New Delhi: Government of India.



- Mohan, V., & Ali, S. (2018). Assessment of the implications of GST (Goods and Services Tax) Rollout on Indian MSMEs. *Theoretical Economics Letters*, 8(15), 3567-3580.
- Molla, A., & Licker, P. S. (2005). Perceived e-readiness factors in e-commerce adoption: An empirical investigation in a developing country. *International Journal of Electronic Commerce*, 10(1), 83-110.
- Moriarty, S. E. (1994). PR and IMC: The Benefits of Integration. *Public Relations Quarterly*, 39(3), 35-38.
- Narayanasamy, K., Santhapparaj, A., & Eze, U. C. (2008). An empirical study of website adoption among Small and Medium Enterprises (SMEs) in Malaysia. *Communications of the IBIMA*, 2(28), 339-351.
- Neirotti, P., Raguseo, E., & Paolucci, E. (2018). How SMEs Develop ICT-based Capabilities in Response to Their Environment. *Journal of Enterprise Information Management*, 31(1), 10-37.
- Nikolopoulos, K.-P., & Dana, L.-P. (2017). Social Capital Formation in EU ICT SMEs: The Role Played by the Mobility of Knowledge Workers. *European Management Review*, 14(4), 409-422.
- Nowak, M., & Phelps, V. (1994). Brand equity: the halo effect measure. *European Journal of Marketing*, 29(4), 57-66.
- Osorio-Gallego, C. A., Londoño-Metaute, J. H., & López-Zapata, E. (2016). Analysis of Factors that Influence the ICT Adoption by SMEs in Colombia. *Intangible Capital*, 12(2), 666-698.
- Perez-Soltero, A., Leon Moreno, F. J., Barcelo-Valenzuela, M., & Lino Gamiño, J. A. (2017). An Approach Based on Knowledge Management for the Use of ICTs in Mexican SMEs. *IUP Journal of Knowledge Management*. Oct2017, 15(4), 7-23.
- Reid, M. (2003). IMC-performance relationship: further insight and evidence from the Australian marketplace. *International Journal of Advertising*, 22(2), 227-248.
- Rouibah, K., Khalil, O. E., & Hassanien, A. E. (2009). *Emerging Markets and E-Commerce in Developing Economies*. Hershey, New York: Information Science Reference.
- Scupola, A. (2003). The Adoption of Internet Commerce by SMEs in the South of Italy: An Environmental, Technological and Organizational Perspective. *Journal of Global Information Technology Management*, 6(1), 51-71.
- Shin, N. (2001). Strategies for competitive advantage in electronic commerce. *Journal of Electronic Commerce Research*, 2(4), 34-41.
- Suhartanto, D., & Leo, G. (2018). Small Business Entrepreneur Resistance of ICT Adoption: A Lesson from Indonesia. *International Journal of Business and Globalisation*, 21(1), 5-18.
- Sunday, C. E., & Vera, C. C.-E. (2018). Examining Information and Communication Technology (ICT) Adoption in SMEs. *Journal of Enterprise Information Management*, 31(2), 338-356.
- Tan, K. S., Chong, S. C., Lin, B., & Eze, U. C. (2009). Internet-based ICT adoption: Evidence from Malaysian SMEs. *Industrial Management & Data Systems*, 109(2), 224-244.
- Wymer, S., & Regan, E. (2005). Factors influencing e-commerce adoption and use by small and medium businesses. *Electronic Markets*, 15(4), 438-453.
- Yin, R. K. (2009). *Case Study Research: Design and Methods*. California: Sage.
- Zhang, P., Aikman, S. N., & Sun, H. (2008). Two types of attitudes in ICT acceptance and use. *International Journal of Human-Computer Interaction*, 24(7), 628-648.