Leveraging social media for electronic commerce in Asia: Research areas and opportunities

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Abstract
The last decade has seen phenomenal growth of electronic commerce in Asia. An important driving force has been the parallel rise of social media, enabling pervasive interactions among consumers and between consumers and firms. This article provides an overview of the current state of development of social media in Asia. We also survey the literature on social media that has been produced by authors in this region. The research covers a variety of topics and issues, including: user behavior with social media, the impacts of social media, and the issues arising from its use. It also identifies a number of future research opportunities that fall into these areas. The Asia region is filled with high potential for promising research regarding how social media may be leveraged for e-commerce. This article calls for more research attention to be given to social media-related e-commerce research, and the discovery of new knowledge related to the connections between social media and e-commerce that are unique to the Asia region.

Keywords:
Social media, Research directions, User behavior, Technology impacts

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1. Introduction
Social media represents one of the most important platforms for electronic commerce. Asia is no exception in this global trend, and it has attained dramatic and high levels of growth in the use of social media in e-commerce during the past several years. For instance, research by McKinsey has indicated that there are more than 300 million consumers in China who use social media to obtain product information (Chiu et al., 2012). McKinsey further estimates that China’s online consumers spend more than 40% of their time on social media. A similar pattern with social media has been observed in Japan, Korea, and other Asian countries. For example, KakaoTalk, Korea’s local social media service, has now more than 100 million global users, with 30 million users of its gaming app in Korea (Takahashi, 2013). The firm has been trying to achieve a dominant position of centrality as an e-commerce platform in Korea. Naver’s LINE, a service that was initiated in Japan, now has 400 million users (Cheng, 2014). In view of these kinds of developments, it is valuable to update our understanding of what motivates the usage of social media and how organizations will be able to make fuller use of it in the Asia region. The impacts of social media on the businesses, economies and societies in the Asia region also need to be understood in greater depth.

At the same time, the development of social media, which affords extensive connectivity and easy information exchange, has also brought with it a number of issues with regard to their use, such as copyright infringement (Carpenter, 2012) and the spread of unverified information and rumors (Dube, 2010). These issues are particularly pertinent in Asia, where institutional policies in the various countries and the region as a whole are not yet very mature. Thus, research is needed to assess the nature and characteristics of these issues, and what measures can be devised to address them effectively.

This essay examines the current state of research on social media in the Asia region, and especially among authors who work in the countries in this region. We investigate a variety of issues, including user behavior involving social media, the impacts and issues associated with social media use, and future research opportunities in these areas that are likely to create significant impacts on research and industry practices due to the new knowledge that is being produced.

2. Social media use in the Asia region
We next will discuss the characteristics of social media development and extant research on user behavior of social media in the Asia region.

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2.1. Characteristics of social media development in the Asia region

Social media are widely used in the daily life activities of consumers and in the business activities of firms in Asia, just like any other region in the world. For example, a University of Southern California-based blogger, quoting a Hollywood Reporter study, reported that 79% of people in the U.S. always or sometimes access Facebook while watching TV (Greg 2014). Another source, KryptoniteDigital.com (2014a,b), provides estimates that are more specific to Asia. For example, in Asia: 85% of marketers point to social media as a major source of business exposure; 48% are able to reduce expenditures using various social media sites; and 45% of small and big retailers are on social media to drive sales. In addition, managers and recruiters analyze social networking profiles to help them make hiring decisions. They look at the profiles of job candidates they are considering, and many of them declare that a person’s social profile is a major factor in their hiring decisions. In addition, restaurants, retail stores, and other service providers are also relying on social media to increase customer loyalty and build more exposure in the marketplace through location-based services.

These phenomena can be observed everywhere around the world and are not Asia-specific. However, there are two notable characteristics in the growth of social media in the Asia region that we would like to point out. They are: (1) the popularity of local social media platforms; and (2) the mobile-first strategies of the service providers. First, the services of local providers have become extremely popular in the Asia region. Korean, Chinese, and Japanese companies have been engaging in heated competition in the social networking service market, together with global giants Facebook, Twitter, and Google. Although Facebook is still the number one social media provider in the world, there are many successful local platforms in the different Asian countries that have large installed bases of users. In China in 2014, according to China Internet Watch (www.chinainternetwatch.com), local providers included QQ with 848 million users, Qzone with 644 million, WeChat with 396 million, and Tencent Weibo with 220 million dominate the market. KakaoTalk, with 30 million users in Korea and 130 million worldwide, started its business with mobile messaging, and extended its market power into the social media market (Takahashi, 2013). Another Korea-based service developed by Camp Mobile is the proprietary social media, BAND, which has attracted 23 million users. Also Naver’s LINE, with 400 million users, started its social media service in Japan and extended its business in Korea and other Asian countries (Cheng, 2014).

Restrictions on Facebook represent one reason, but may not be the only reason for the popularity of local platforms in China. Language barriers across the Asian countries also make Asia’s social media market fragmented. According to a research by Singh et al. (2010), many non-English speaking countries show a higher preference for their own language over English. China is the strongest at 86% preference for content in simplified Chinese. Although the Lionbridge study did not cover Korea and Japan, one may guess that these countries probably have a higher preference for social media in the local languages, considering the English proficiency levels of the people in these countries (Hong, 2014).

According to Yu et al. (2011), there is a big difference in the social media content shared in China, when compared to Twitter, the global social media provider. The level of social media traffic in China is almost entirely due to retweets of media content, including jokes, images, and videos. In contrast, on Twitter, retweets of media content tend to have more to do with current global events and news. This makes it so that the platforms that are based on local languages have a basis for competitive advantage.

A second key characteristic of Asian social media is that the service providers have strength in mobile social media. In fact, many Asian local platforms have their origins in the mobile market. For example, China’s WeChat, Korea’s KakaoTalk, and Japan’s LINE all were originally designed as pure mobile messaging services. Then, as mobile devices have come to possess stronger processing capabilities, messaging apps have extended the functionality of social media in beneficial ways. This has enabled richer forms of social networking and supporting new and innovative forms of interactions among people.

Another reason for Asia’s mobile-first strategy is that a great proportion of consumers in this region access the Internet through mobile infrastructure. Some of the advanced economies, such as Japan, Korea, Hong Kong, and Singapore, have established fixed-line broadband infrastructure. However, other countries, especially some Southeast Asian countries, have relatively poorer infrastructures for Internet accesses. Thanks to the high penetration of mobile technologies such as 3G services in these countries, users can more easily access the Internet via their mobile devices. So the mobile-first strategies of firms have been appealing to the consumers in this region.

2.2. Surveying current research on user behavior of social media in the Asia region

Social media has become an important area of exploration for university and industry researchers interested in online technologies and their impacts on consumers and businesses. The Asia region has about half of world’s population and a similar share of social media users. Thus, social media in Asia is a good research target for IS, e-commerce and technology researchers. It will be valuable to explore business and consumer behavior in the social media market, as well as the impacts of social media on businesses, society and the economy in the Asia region.

Considering the fact that the history of social media is relatively short, it is not surprising to see that studies on this topic in this region are not very abundant. Since many of the early studies are conference papers, our expectation is that the number of journal articles will increase soon. To give the reader an idea of how this area of research inquiry is developing, we categorized social media research studies in Asia into three groups. The first includes behavioral studies, which attempt to understand users’ behavioral characteristics in relation to social media. The second includes social media impact evaluation studies. And the last involves studies on the issues arising from social media use.

The behavioral studies typically survey social media users to uncover their motivation to engage in social media related activities. Table 1 offers a list of behavioral studies on Asian social media.

There are a number of good examples of this kind of research. One is Choi (2013), who investigated the factors that affect continuous usage of social media in Korea. Another work is by Chung et al. (2012), who focused on the impact of characteristics of social media on information sharing in social media, also in Korea. Huang et al. (2014) found that the use of enterprise micro-blogging improves operational performance by increasing marketing capability. Jang et al. (2013) examined the impact of friendship desire on citizenship behavior in social media in Korea. Kim et al. (2012) evaluated the determinants of continuance and word-of-mouth intention in Korea’s social media. Wu et al. (2013) reported how four dimensions of perceived interactivity (control, synchronicity, surveillance, and social bandwidth) affect users’ bridging and bonding social capital in Taiwan. Zhang et al. (2013) investigated how product attitudes form on online review sites with social networks in China.

In this special issue, Wang et al. (2015) investigated the factors that influence users’ posting of status updates on micro-blogging. Their study highlights the unique nature of such behavior. They
2.3. Surveying current research on the impacts of social media use in the Asia region

Information systems researchers have also assessed the commercial and social implications of social media. Table 1 shows a list of user behavior studies involving social media in the Asia region.

Table 1
A list of user behavior studies involving social media in the Asia region.

<table>
<thead>
<tr>
<th>Authors</th>
<th>Targeted behavior</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chen et al. (2015)</td>
<td>Tweets and retweets on micro-blogging platforms</td>
<td>China</td>
</tr>
<tr>
<td>Choi (2013)</td>
<td>Continuous usage of social media</td>
<td>Korea</td>
</tr>
<tr>
<td>Chung et al. (2012)</td>
<td>Information sharing in social media</td>
<td>Korea</td>
</tr>
<tr>
<td>Huang et al. (2014)</td>
<td>Use of enterprise micro-blogging</td>
<td>China</td>
</tr>
<tr>
<td>Jang et al. (2013)</td>
<td>Citizenship behavior in social media, online friendship</td>
<td>Korea</td>
</tr>
<tr>
<td>Kim et al. (2012)</td>
<td>Continuous social media use, word-of-mouth intention</td>
<td>Korea</td>
</tr>
<tr>
<td>Wang et al. (2015)</td>
<td>Posting status updates on micro-blogging</td>
<td>China</td>
</tr>
<tr>
<td>Wu et al. (2013)</td>
<td>Bridging and bonding among people</td>
<td>Taiwan</td>
</tr>
<tr>
<td>Zhang et al. (2013)</td>
<td>Consumers’ product attitudes</td>
<td>China</td>
</tr>
</tbody>
</table>

2.4. Surveying current research on the issues of social media use in the Asia region

Though the benefits of social media are well-recognized, issues arising from their use should also be noted. The Asia region, where social media is widespread and well established, has become a fertile ground for research on social media issues. This is partly due to the relatively immature institutional policies that are in place in the Asian countries and across this region. Issues that arise from the use of social media are especially important. Among the studies that have been conducted, two types of social media issues are especially notable: copyright infringement issues; and the spread of unverified information and rumors. Table 3 presents the studies that investigate the above issues related to social media use in the Asia context.

Table 2
A list of studies on social media impacts in the Asia region.

<table>
<thead>
<tr>
<th>Authors</th>
<th>Targeted variables</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chen et al. (2013)</td>
<td>Structure of online friends in social media</td>
<td>China</td>
</tr>
<tr>
<td>Goh et al. (2013)</td>
<td>Social media contents, customer purchases</td>
<td>Singapore</td>
</tr>
<tr>
<td>Kim et al. (2014)</td>
<td>Social media sentiments, stock prices</td>
<td>Korea</td>
</tr>
<tr>
<td>Pervin et al. (2014)</td>
<td>Retweetability</td>
<td>Japan</td>
</tr>
<tr>
<td>Phang et al. (2013)</td>
<td>Social network structure, tendency to purchase niche cultural products</td>
<td>China</td>
</tr>
<tr>
<td>Phang et al. (2014a)</td>
<td>Responses to banner ads, digital coupons via consumer review sites</td>
<td>China</td>
</tr>
</tbody>
</table>

Table 3
A list of studies involving issues of social media use in the Asia region.

<table>
<thead>
<tr>
<th>Authors</th>
<th>Targeted behavior</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acat and Muraki (2011)</td>
<td>Unreliable retweets during crisis events</td>
<td>Japan</td>
</tr>
<tr>
<td>Bai (2012)</td>
<td>Dynamics of rumor spreading</td>
<td>China</td>
</tr>
<tr>
<td>Dong and Jayakar (2013)</td>
<td>Baidu's music settlement</td>
<td>China</td>
</tr>
<tr>
<td>Shi (2008)</td>
<td>Copyright infringement, user creativity</td>
<td>China</td>
</tr>
<tr>
<td>Wu et al. (2015)</td>
<td>Detection of rumors on micro-blogging platforms</td>
<td>China</td>
</tr>
</tbody>
</table>
a turning point for copyright reform in China. They discussed the significance of this agreement for copyright enforcement and the ecology of digital music distribution in the country.

In this special issue, Kim et al. (2015) highlight how newer technologies in general raise copyright infringement issue. Although their research does not address social media in the Asia context per se, it still may offer valuable insights in this area. They focus on cloud digital video recorder (DVR) technology (Seward, 2014).

Using a macroeconomic modeling approach, they show that applying the fair use doctrine related to copyrights to new information technology may hamper the creation of value for the copyright holders' business models, and also diminish the level of social welfare that technological innovations provide.

Social media in China has created a hothouse for the spread of rumors and disinformation in that country. Bai (2012) explored this issue, and found that the guanxi network of relationships among people is expanded through the use of social media, contributing to the spread of rumors. They further noted that the openness and freedom of expression on the Internet also may serve to prevent the spread of rumors. Wu et al. (2015) further proposed an approach to detect the creation of rumors in micro-blog platforms. Their approach involves the combination of features from the topics of the original message, the sentiments that are communicated in the responses, the observed patterns of message propagation, and the profiles of the users who transmit the messages. In the context of crisis communication, Acar and Muraki (2011) showed that Twitter can facilitate the beneficial communication of crisis-related information in a timely manner. They also reported a less optimistic message: that retweets of unreliable information appear to have led to misunderstanding and confusion that would diminish the trust that users have for Twitter as a social media platform for crisis information dissemination.

3. Future research opportunities

Our goal in this article has been to provide a glimpse into the current state of the market for Asian social media, and the related literature on social media use and impacts. We also sought to identify some of the issues that have arisen from the use of social in the Asia region. As a whole, research on social media in the Asia region is still in the nascent stage. Considering that half of social media users are in Asia and the unique characteristics of this geographic context, research opportunities abound in the region. We next discuss potential research opportunities in the broad area of user behavior related to social media, its impacts, and issues arising from social media use in the Asia region.

3.1. Social media-related user behavior and its impacts

In terms of social media user behavior and their impacts, three directions seem particularly promising: (1) exploring the unique nature of different social media and the associated factors influencing their use; (2) assessing cultural factors in the Asia region and their influence on social media-related user behavior and impacts; and (3) mobile social media.

Under the broad umbrella of social media, a variety of social media applications have been made available in the Asian market, such as the social networking services Renren.com and Cyworld, micro-blogging via Sina Weibo, and mobile instant messaging through Kakaotalk, WeChat, and LINE. Each social media application has its unique characteristics, which may dictate how people use each of them. For instance, micro-blogging usage seems to be more spontaneous and less rational in nature, as highlighted by Wang et al. (2015) in this special issue. Thus, the factors influencing its use by posting status updates are likely to be different from other social media applications. Given the constant innovations of social media applications in the Asia region, future research may delve into the unique characteristics of each of these and similar applications and investigate the associated antecedents of user behavior, as well as how the impacts differ across the different applications.

In addition, other than analyzing Asian social media data, it will be interesting to consider cultural factors in new research, since there are language barriers and cultural differences between the Western and Asian countries. There are also differences within the Asian countries in how social media-based communications are used. Previous research has shown that cultural factors may play a role in influencing social media use. For instance, Phang et al. (2014a) showed that the collectivist culture of Chinese consumers may explain why they may be more receptive to merchants' use of digital coupons compared to banner ads on social media sites. Future research may try to uncover other cultural dimensions that may be relevant for explaining social media user behavior and its impacts in Asia.

Moreover, even within the Asia region, different countries may have different cultures that require specific research attention to be given to understand social media use in greater detail. For example, China has been recognized for demonstrating a low level of avoidance of uncertainty, whereas Korea scores relatively high on this dimension. So it will be interesting for researcher to conduct comparative analyses to unveil how subtle cultural differences such as this may lead to variations in social media user behavior. An example is the willingness of users to disclose personal information on social networking sites to obtain personalized information or services. Another aspect is the impact of user responses in the use of social media across the Asian countries for commercial information communication and dissemination.

Furthermore, given the mobile-first strategy of many social media providers in Asia, it is important for researchers to note this characteristic of social media development in the region, and leverage it to conduct cutting-edge research that affords insights into user behavior on emerging mobile technology platforms. For instance, in a conceptual article by Phang et al. (2014b), the authors noted three features that are pertinent for mobile social networking applications. These include: (1) profile information related to users, including demographics, preferences, and social network contacts; (2) spatial information related to the user's location and surrounding environment; and (3) temporal information related to the dimension of time for what a user is doing. They argued that service providers may employ such information separately and in combination to enhance the commercial effectiveness and viability of mobile social networking applications.

For instance, a service provider may come to know that a user is currently shopping in a specific shopping district around noon through spatial and temporal information. The user may be doing this together with his friends, who are also using the same application to leverage profile information. The app will be able to record the social network and interactions of users. The service provider may then offer group-based discount coupons to these users to help promote the products and services of nearby shops that subscribe to its service.

Researchers also may tap into the abundant opportunities in the Asia region to study these kinds of issues. It may also be fruitful to incorporate cultural considerations in the investigation of how various mobile phone and service features influence user behavior on social media and what impacts they create. A related example is discussed in a study by Tan et al. (2014), who showed that the high context culture of the Chinese consumers leads them to prefer the use of mobile SMS over email to receive and forward digital coupons, in comparison to Swiss consumers whose preferences are different. However, their study focuses on a conventional type of social media.
mobile application (SMS) but not contemporary mobile social media that afford fuller social networking and interaction capabilities, as well as potentially greater research opportunities.

3.2. Issues related to social media use in the Asia region

As we previously noted, the easy information exchange and high connectivity of social media creates beneficial effects, but also raises issues regarding their use, especially copyright infringement and the spread of unverified information. Other issues can be investigated in this area too. For instance, user privacy concerns are likely to be an increasingly salient issue for social media users, given that Asian users spend a lot of time using these applications. They also provide a lot of personal information, both voluntarily and involuntarily, in the process of using social media apps. Cultural influences will be central in the investigation of this issue. For example, prior research has reported that Chinese users are generally less concerned about online privacy than their Western counterparts (Chen and Tsoi, 2011). Future research may investigate under what conditions and to what extent privacy concerns act as an inhibitor for social media use among Asian users. A significant concern is the kind of information disclosure that is required during the process of using social media apps.

Also unclear is whether the mobile-first development of social media in Asia will lead to a reversal of the patterns of privacy concerns that have been observed heretofore. For example, it is possible that Chinese and other Asian social media users may become highly sensitive to the loss of privacy in the intimate mobile phone context, similar to Western users.

Another issue is the possibility of addiction and the associated psychological consequences, such as depression, which often result from social media use (Xu and Tan 2012). Given the especially high usage rate and dependence of Asian users on social media, could this issue be particularly serious in this region? What unique factors may lead to user addiction to social media in this context?

These are important research questions to be answered in future research, too.

In conclusion, although some research has been conducted on these social media-related topics in the Asia region, there are outstanding research opportunities to obtain a deeper and more comprehensive understanding of how social media can be leveraged to enhance the quality of e-commerce. We hope this article, and the special issue’s articles that accompany it, will stimulate new research to achieve this goal.

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Dong, X., Jin, X.L., Zhou, Z., Fang, Y., Lee, M.K.O., Hua, Z. 2015. The effect of business value of enterprise micro-blogging: from social media use (Xu and Tan 2012). Given the especially high usage rate and dependence of Asian users on social media, could this issue be particularly serious in this region? What unique factors may lead to user addiction to social media in this context?

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