Establishing Trust in Social Commerce through Social Word of Mouth

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Abstract
Social commerce, a new stream in e-commerce, enables hyper-informed consumers to support the businesses in new product development. Hyper-informed consumers are the results of online communication provided by social media. These consumers have been empowered by Web 2.0 technologies to have online communication, which drives value for the companies in new product development. Trust is one the values that might be provided by the online communication of individuals through sharing the knowledge and experience of a new product. The paper sheds on new product development and trust concepts along with social commerce construct theory in order to develop a research model for investigating the impact of online communication of consumers, which produce social word of mouth on trust building mechanisms. The results from a survey reveal that social word of mouth, offered by social media, increases the level of trust on new products. The conclusion, discussion, and future research suggestion in the end of the paper support its contribution to the track of marketing and innovation.

Keywords: Social Commerce, Social word of Mouth, Trust, Web 2.0, Social Media, PLS.

Introduction
Trust for many years has been one the main issues in the online business world. Successful online businesses succeed by building trust in their customers (Salam, Iyer, Palvia, & Singh, 2005). Those businesses are successful because they have worked hard to develop their trust building strategies in online platforms. In fact, trust is one of the most important factors influencing the success of an e-commerce platform (Gefen, 2000).

Trust in general is a key element in all economic and social climates; consumers may feel uncertainty, specifically for new technologies, (Gefen, 2000) or for new products where they may not have enough knowledge or experience about a product or service. Trust is facilitated by knowledge transfer (Zhao & Lavin, 2012), which can be used very successfully for new product development. When there is no market or little knowledge about a new product or service in the marketplace, individuals prefer to seek out more information than that provided by a company on their own websites (Hajli, 2013a). The type of information that a customer needs can often be found in an offline environment via
friends or family or through social media or other new technological developments.

With the recent advancement of the internet and emergence of Web 2.0 technologies such as social media, a new way of communicating between individuals has been shaped, called online communication (Hajli, 2013b). In this area, individuals use social media to establish online communication and social interaction. Social media has empowered consumers to be more active and thus, hyper-informed consumers, who can influence the market, have emerged. Hyper-informed consumers are results of online communication provided by social media. This is mainly because of the growing popularity of social networking sites (SNSs) that facilitate interconnectivity of consumers; it is now very easy to share their information and knowledge about a product or service (Liang & Turban, 2011). The new opportunities that social media now provide for potential customers has developed e-commerce into social commerce (Hajli, 2012a).

Consumers can learn through their online communications and share their knowledge in real time with their peers. Social interaction of consumers in an online context also offers value for new product development (Füller & Matzler, 2007; Hajli, 2013a; Ming-Ji & Chin-Hua, 2013). This highlights a valuable source of external knowledge (Su, Chen, & Sha, 2006), which in turn leads to open innovation (Füller & Matzler, 2007). Hajli (Hajli, 2013a) argues that the interconnectivity of consumers on the internet should now be regarded as a valuable source of innovation for businesses, particularly those involved in new product development. The internet has been developed to provide low cost mass communication and interactive facilities, thus providing opportunities for consumers to experience a new product (Füller & Matzler, 2007) or share their experiences and knowledge with other customers; this can be a fundamental basis for building trust in a business through social word of mouth. In this way, both consumers and businesses co-create value (Pongsakornrungsilp & Schroeder, 2011) for the whole business process.

Toward these ends, the present study explores the opportunities that social commerce can provide to overcome the barrier to ensuring trust in an online context. More specifically, this empirical research looks at the social interaction of individuals through social media and textual information produced by consumers for new products; this can be a valuable source for peers looking to evaluate a new product or service. The contribution of this research is to give an alternative strategy to providing trust in an e-commerce environment. In addition, the study brings to the desk the impact of social commerce on innovation and new product development by suggesting how to build trust in a new product or how to use consumers’ experience and knowledge to shape future business plans. A survey has been conducted, using PLS-SEM to analyse the effect of social commerce on trust.

This paper is organized as followed. The literature review on trust and social commerce was initially undertaken before a theoretical framework was developed to propose the research model. In the next section, the methodology and the way in which the data was collected and analysed has been described. This is followed by the structural model and discussion of the results. Finally, the implications and conclusions of the study conclude the paper.
Literature Review and Theoretical Framework

Trust

Trust is a key element of e-commerce (Kim, Song, Braynov, & Rao, 2005; Morid & Shajari, 2012) and distrust is one of the main reasons for e-commerce failures (Jones & Leonard, 2008). Trust is an especially important factor in an online context, specifically where risks are perceived to be high (Gefen, Karahanna, & Straub, 2003; Mutz, 2005). Literature related to trust can be found in many disciplines such as information systems (Ba & Pavlou, 2002; Salam et al., 2005), management (Mayer, Davis, & Schoorman, 1995), marketing (Jin, Cheng, & Yunjie, 2009; Li, Zhou, Kashyap, & Yang, 2008), sociology (Das & Teng, 2004) and innovation (Füller, Bartl, Ernst, & Mühlbacher, 2006; Hajli, 2013a; Zhao & Lavin, 2012). There are different definitions of trust, but one widely accepted and cited by many scholars comes from Mayer (Mayer et al., 1995), who defines trust as “the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other party will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party.” Trust is a key factor in a business as it influences consumer behaviour, leading to purchase intention (Hajli, 2012a; Jones & Leonard, 2008; Ming-Hsien, Chandlrees, Binshan, & Hung-Yi, 2009; Yu-Hui & Barnes, 2007). Trust is also important for those businesses developing a new product or those seeking to find the correct market for a product or service (Hajli, 2013a). These companies need to reduce perceived risk in the market for any new product by applying different strategies; trust building is an essential strategy to make these companies successful.

There are different dimensions of trust (Ba & Pavlou, 2002; Gefen, 2002), benevolence and credibility being two of the main ones. This research measures the trust based on these two dimensions. Benevolence is defined as repeated seller-buyer relationships (Ba & Pavlou, 2002). Credibility usually is impersonal and relies on reputation information. Credibility is defined as the belief that the other party in a transaction is reliable and honest (Ba & Pavlou, 2002).

Although there is some literature for e-commerce, this method of trading is still a new concept for many people (Jones & Leonard, 2008). Therefore, it is important to work on methods to attract consumers to adopt e-commerce, such as trust building mechanisms. More specifically, with the emergence of Web 2.0 and the popularity of social networking sites, it might be easier to emphasise the familiarity for some of international e-commerce; this could lead to increased trust (Hajli, 2012a). However, trust is an issue in social networking sites as well (Shin, 2010). It is mainly because in many cases, consumers have no prior knowledge about each other in their virtual networks. However, research shows that interconnectivity of individuals through social media does offer trust to the network. (Hajli, 2012a, 2012b; Hennig-Thurau et al., 2010)

Social commerce

Social commerce is a new stream in e-commerce. Social commerce uses SNSs to establish social interaction of consumers to facilitate e-commerce (Kim & Park, 2013). Social commerce is defined as a subset of e-commerce and relation based online business
(Stephen & Toubia, 2010). With the growth in popularity of social networking sites and social media, more and more individuals are coming online to have social interaction (Liang, Ho, Li, & Turban, 2011). Hence, e-vendors can now draw up business plans based on social media strategies (Kaplan & Haenlein, 2010).

Today, e-vendors try different strategies to improve their relationships with consumers to enable them to develop customer trust in their networks (Johann, Bartl, Ernst, & Hans, 2006). They now use social media to build these relationships (Hajli, 2013b). Social interaction of consumers is likely to encourage other consumers to form beliefs concerning ability to deliver and integrity (Wang, Yu, & Wei, 2012). Consumers use social commerce constructs to produce text; this information then provides value for the business. The text produced in these platforms can provide evidence that an online business has acted in an honourable fashion based on the interest of its customers (Marshall, Moncrief, Rudd, & Lee, 2012). Such information, produced through reviews or interaction in online forums and communities, can be extremely valuable (Do-Hyung, Jumin, & Ingoo, 2007).

Consumers use different platforms provided by Web 2.0 technologies to develop their relationships with other peers in the network. They may rate and review a product, or participate in an online forum or community to share their knowledge and experiences about a new product. In addition, consumers may refer and recommend a product or service to other members of a network. Hence, they apply social commerce constructs, namely forums, communities, ratings, reviews, recommendations and referrals to share the information they have with others (Hajli, 2013a). Other consumers, who may be looking for additional information to that provided by a company, apply this feedback in their purchasing decisions. An innovative company looking to develop a new product, will set up a forum or community to attract consumers to share their experiences and information on these social platforms, thus providing an alternative source of information for new customers.

Online communities, as a main construct of social commerce, give an opportunity within a social sphere for people to share information and gain knowledge (Chen, Xu, & Whinston, 2011). Online communities can be used as a source of product know-how (Johann et al., 2006). Users interact in social commerce platforms in a collaborative online environment (Curty & Zhang, 2011). It is also argued that online communication of consumers in social commerce constructs provides social support, which leads in turn to trust in the network (Crocker & Canevello, 2008). These types of support, which can be both informational and emotional, persuade individuals to re-use the system (Bhattacherjee, 2001) or try a new product again. Hence, these communities are valuable sources of innovation for the marketplace (Johann et al., 2006). In addition, communities are the main drivers of change from e-commerce to social commerce (Huang & Benyoucef, 2013).

Ratings are another form of social commerce construct, providing valuable information for other peers. A common system in use is numerical ratings, typically ranging from one to five stars, from very low (one) to very high (five) (Nambisan, 2002). Reviews, another type of social commerce construct, have potential to reduce uncertainty and increase consumer trust. The quality of content and information provided by online reviewers can reduce or increase uncertainty (Nambisan, 2002). Research shows that such reviews have added value
for the members of a community or for other customers (Heinonen, 2011; Keller, 2009). Consumers might use recommendation systems to recommend a new product to other members of a community. This again can build trust in future transactions (Huang, Cai, Tsang, & Zhou, 2011).

Social commerce constructs, therefore produce social word of mouth. Social word of mouth is the latest development of electronic word of mouth, using social media to give more opportunities to consumers for having online communication. Social media empowers consumers to generate content and share it via social platforms, provided by Web 2.0 and Web 3.0. Word of mouth has received enough attention in research and practice (Cheung & Thadani, 2012); however, social word of mouth is a new concept and with the increasing popularity of social media this terminology will be soon used in marketing and information systems. Consumers’ review in an online context is informants and recommenders and is influenced by sales (Do-Hyung et al., 2007). However, it is limited to the individuals, known in the community. Social word of mouth, through social media and social commerce constructs such as communities, ratings, and referrals, overcomes the barriers and provides opportunities to consumers for interacting online and getting to know peers. With the help of social commerce constructs consumers mix and match tools in order to build up trust or get familiar to products or services.

The above discussion can be summarised to conclude that online business are now applying social media strategies to interact with consumers (Amblee & Bui, 2011) to develop trust in their relationship with consumers. These interactions provide social word of mouth, an enhanced source of knowledge to complement the information that e-vendors provide on their websites. Consequently the level of trust will increase (Lu, Zhao, & Wang, 2010). Through such communication, consumers can inform a business all the way through from design, development and testing to the product support phase (Nambisan, 2002). Research shows that the social relationship of consumers through social media significantly influences perceived trust of consumers (Pan & Chiou, 2011). Consumers use social commerce constructs to interact online, which produces trust in the network (Hajli, 2013a). Social commerce constructs, indirectly through familiarity and social presence, also have an influence on trust (Hajli, 2012a). Indeed, positive textual information produced by consumers create a higher level of trust in a business (Ba & Pavlou, 2002). A good example of this is electronic word of mouth through online review, which drives trust in the network (Ono et al., 2003). The quantity of textual information provided by other consumers increases trust (Do-Hyung et al., 2007). This review of existing literature leads the research to test the relationship of social commerce constructs and trust based on the proposed model shown in Figure 1.
Research methodology

A survey has been conducted using an online questionnaire to test the proposed model. The questionnaire items have been adopted from previous research to ensure the validity of the research.

Subjects and data collection

The authors have developed a questionnaire to conduct a survey in different social platforms. The target was to carry out an investigation in online forums and communities or any other social platforms, where individuals rate and review or recommend and refer a product or service. Therefore, an e-questionnaire has been developed using Google forms and the link distributed to many online platforms. The email has been prepared to invite individuals to participate in the survey. The authors have sent a number of emails and messages to online boards, such as Facebook Company pages, with different online forums and communities related to products or services. This was done in the two months of January and February 2013. The authors targeted participants that have used social media such as social networking sites. From 54 posts in different forums, communities or other platforms where individuals rate, review, recommend or refer products or services, 300 emails were received. This produced 295 usable online questionnaires. These participants were all previously using social media. This sample is made up of 60% female and 40% male, with most of them (85%) living in the UK.

Data Analysis

The present research uses structural equation modelling (SEM) as different scholars
Gefen, Rigdon, & Straub, 2011; Gefen & Straub, 2000; Ringle, Sarstedt, & Straub, 2012) argue that this approach has advantages over Multiple Regression. In SEM, the authors intended to estimate a set of causal relationships (Esposito Vinzi, Chin, Henseler, & Wang, 2010). Within the SEM approach, the authors have chosen partial least square (PLS). PLS deals with small sample sizes, giving a unique advantage to the study using this method (Chin, 1998; Ringle et al., 2012). PLS is appropriate for exploratory research, as the nature of this study is (Naylor, Lamberton, & West, 2012). By using PLS, the authors can assess the validity and reliability of constructs (McLure & Faraj, 2005). Finally as the model of this research is new, PLS is seen as a good method to validate new models (Gefen et al., 2011).

Reliability

Reliability can be tested by composite reliability in PLS-SEM, which should exceed 0.70 (McLure & Faraj, 2005). Composite reliability of all constructs, as shown in Table 1.0, exceeds 0.70. In addition to this, the authors show the Cronbach’s alpha in Table 1.0, indicating the research also has achieved this criteria for reliability.

Validity

To test the validity of the research, the authors have taken different steps to look at the validity from different angles. Initially, content validity through literature review (Gefen, 2002) in information systems, innovation and marketing has been carried out. Moreover, the questionnaire items have been adopted from existing literature, which provides further content validity (Gefen et al., 2003; Pavlou, 2003). In addition to these steps, the authors invited other researchers to check that the scale items were unambiguous. As the researchers had no previous knowledge of these scales, this step also ensured content validity of the study (Wang et al., 2012). This also provided face validity for the research. Comparing the main questionnaire with the proofread one showed up no obvious areas for concern. However, some items were amended before being sent out for the pilot study. The pilot study conducted with 10 students ensured complete validity before carrying out the main test. The results from the pilot study were not included in the final data collection. In the next step, the study applies both discriminant validity and convergent validity to
ensure the validity of the research (Chin, Gopal, & Salisbury, 1997; Hajli, 2013a). Average variance extracted (AVE) has been used to assess convergent validity; this should be at least 0.50 for each construct (Wixom & Watson, 2001). Testing discriminant validity was the next step taken by comparing the square of the correlations among the latent variables with the AVE of each construct (Chin, 1998). This is shown in Table 2.0.

### Table 2. Square of correlation between constructs.

<table>
<thead>
<tr>
<th></th>
<th>Forums and Communities</th>
<th>Recommendation and Referrals</th>
<th>Rating and Reviews</th>
<th>Trust</th>
</tr>
</thead>
<tbody>
<tr>
<td>FC1</td>
<td>0.805721</td>
<td>0.690857</td>
<td>0.628516</td>
<td>0.318684</td>
</tr>
<tr>
<td>FC2</td>
<td>0.708251</td>
<td>0.501125</td>
<td>0.517481</td>
<td>0.371624</td>
</tr>
<tr>
<td>FC3</td>
<td>0.884578</td>
<td>0.660708</td>
<td>0.718851</td>
<td>0.355267</td>
</tr>
<tr>
<td>FC4</td>
<td>0.785633</td>
<td>0.524723</td>
<td>0.717593</td>
<td>0.357635</td>
</tr>
<tr>
<td>RE1</td>
<td>0.636621</td>
<td>0.873818</td>
<td>0.60891</td>
<td>0.337511</td>
</tr>
<tr>
<td>RE2</td>
<td>0.63483</td>
<td>0.887083</td>
<td>0.646462</td>
<td>0.336576</td>
</tr>
<tr>
<td>RE3</td>
<td>0.694634</td>
<td>0.872887</td>
<td>0.785346</td>
<td>0.431353</td>
</tr>
<tr>
<td>RT1</td>
<td>0.590789</td>
<td>0.673594</td>
<td>0.828256</td>
<td>0.332958</td>
</tr>
<tr>
<td>RT2</td>
<td>0.614472</td>
<td>0.651055</td>
<td>0.850263</td>
<td>0.284863</td>
</tr>
<tr>
<td>RT3</td>
<td>0.659759</td>
<td>0.720979</td>
<td>0.88174</td>
<td>0.362088</td>
</tr>
<tr>
<td>RT4</td>
<td>0.662115</td>
<td>0.573396</td>
<td>0.796552</td>
<td>0.391069</td>
</tr>
<tr>
<td>T1</td>
<td>0.372016</td>
<td>0.237946</td>
<td>0.22382</td>
<td>0.744124</td>
</tr>
<tr>
<td>T2</td>
<td>0.225745</td>
<td>0.188134</td>
<td>0.205464</td>
<td>0.700284</td>
</tr>
<tr>
<td>T3</td>
<td>0.366609</td>
<td>0.392531</td>
<td>0.422957</td>
<td>0.797341</td>
</tr>
<tr>
<td>T5</td>
<td>0.233522</td>
<td>0.298821</td>
<td>0.218714</td>
<td>0.703474</td>
</tr>
<tr>
<td>T6</td>
<td>0.381257</td>
<td>0.387621</td>
<td>0.368793</td>
<td>0.807093</td>
</tr>
</tbody>
</table>

In the last step of testing validity, the authors assessed the factor loadings of an indicator. The loading should be greater than the construct of it than any other factor (Chin, 1998; McLure & Faraj, 2005). This step can give an overall picture to see the discriminant and convergent validity in one place. As shown in Table 3.0, there is not a cross loading and all the factors of each constructs (highlighted in Table 3.0) are above 0.70 and greater than the constructs of it than their column. The authors need to mention that one of the questionnaire items in trust (T4) had factor loading of 0.67, which has subsequently been dropped. As this construct had enough items, it did not affect the whole construct.

### Table 3.0 Cross Loadings

#### Structural model

For the structural model the authors used SmartPLS 2.0 software (Ringle, Wende, & Will, 2005). The results show that the paths of the model are positively significant at the 0.05 level. The authors’ investigation shows that the model fits; $R^2$ accounts for almost 42% of the variance in trust. According to this result, an acceptable level of explanation has been achieved in this research. This means that trust was affected by three second order
constructs of social commerce. Therefore, the model has a satisfactory level of explanation power. The path coefficients of the model have been shown in Figure 2.0. This indicates that social commerce constructs (0.455) have a significant effect on trust. Hence, the positive relationship of SCCs and trust is supported.

![Figure 2. Results of the PLS Analysis](image)

* p < .05; ** p < .01; ***p < .001.

**Discussion**

E-commerce has given rise to the development of social commerce in recent years by the emergence of social media and increasing popularity of social networking sites. However, e-commerce is still new for many people as there are barriers to the adoption of e-commerce technologies. Trust is one such barrier. It is even more difficult for a business planning to develop a new product in a new market. In this case, the experiences and knowledge about the product is limited. Consumers prefer to have more information produced by other consumers rather than only that produced via the online vendor in the website of the company. Enabled by social media and social commerce, consumers use social commerce constructs - forums, communities, ratings, reviews, recommendations and referrals to share their knowledge and experiences about a product or service for other individuals, which form another type of word of mouth; social word of mouth. According to the results of PLS-SEM, social interaction of individuals through social commerce constructs offers social word of mouth a valuable source of trust to the network of participants. The results show that potential buyers looking for social word of mouth related to a new product rely on textual information produced by other consumers through ratings and reviews. Users also participate in different online forums and communities by posting questions about a product or service to gather knowledge and experiences about a product they need, but for which they have little knowledge. Potential consumers depend more on
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Information and experiences provided by peers than what a company offers through a website. Participants in social media in general look at the recommendations and referrals of other consumers when they want to test a new product. These interactions, provided through social commerce constructs, produce both informational and emotional support to the network. Therefore, the interconnectivity of participants on the internet through social commerce constructs can establish trust in a new product, thus supporting a business to develop the new product. This is an indication of the impact of social commerce in innovation, consistent with previous research (Hajli, 2013a). The results of the study give an alternative strategy to development of trust in the online context. Moreover, the results show that social commerce now provides a valuable source for innovative work by supporting businesses in new product development. Companies can develop their social commerce strategies by employing consumers to use their existing knowledge and experiences. This strategy will enrich the development of a new product, a strategy which cannot be achieved by a company alone.

Implications
The present research has a few theoretical and practical implications. The theoretical implication of this research for e-commerce is that online communication of individuals on the internet can be used to support trust building mechanisms in e-commerce platforms. Trust as on-going issue in e-commerce is a challenging factor. This can be tackled with the emergence of social media, providing a new research area in e-commerce to develop social commerce constructs theory. Introducing social word of mouth might be another contribution of this research, which can be a base for theory development in the literature of word of mouth. The present study also has practical implications. There should be a focus on the development of social commerce constructs such as forums and communities to facilitate interaction of consumers and the sharing of knowledge and experiences about a new product. Practitioners can apply social commerce strategies by putting customers to work in new product development, from the design phase to testing of a product. Online businesses also can develop their strategies to build up trust in their online platforms through social commerce constructs.

Limitation and future research direction
This research is not free of limitations. The present research gathered 295 samples, which is enough to run PLS-SEM, but not enough for generalising the results. Therefore, any future study can develop the research to include more samples in different social platforms where individuals use social media. The other limitation of this research was the dropped item of trust construct T4, which has a lower than 0.70 factor loading. Testing the model in other settings can be a future research direction by developing the model to include more constructs such as consumers’ purchase intention. In addition, the research can identify specific samples, using new products to generalise the results in an innovative discipline. Finally, the study introduces social word of mouth; however, more theoretical foundations are needed for a more precise development of this terminology in marketing and information systems. The future research should develop this terminology and apply
theories such as social support in order to examine the influence of online communication of consumers on the development of social word of mouth.

**Conclusion**

A survey has been conducted to examine the role of online communication of individuals on the internet in building trust on e-vendor platforms. The research discusses how social word of mouth has emerged from social commerce constructs influenced by consumer’s trust in the network. More specifically, the research has investigated the value that social commerce can offer to innovation. The model has been tested to identify the influence of social commerce constructs - forums, communities, ratings, reviews, recommendations and referrals - on trust in an online context. It has also examined how these constructs can develop trust in consumers for new products. The results show that social commerce constructs support the innovation process of a business by using social media to provide tools to consumers to share their knowledge and information about a new product or service. Data revealed from PLS-SEM analysis indicates that social commerce is a new tool for businesses to test a new product and build up trust for new products or services.

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