CONVERSATION, COMMUNITY, AND E-COMMERCE AS SOCIAL COMMERCE MODEL FOR FOOD AND BEVERAGE BUSINESS IN PHITSANULOK PROVINCE

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Received: April 26, 2018; Revised: July 20, 2018;
Accepted: October 11, 2018

Abstract

The main objectives of this research were to 1) analyze exploratory factors for Social Commerce Model for food and beverage business in Phitsanulok Province and 2) analyze the second order confirmatory factors for Social Commerce Model for food and beverage business in Phitsanulok Province. This was the quantitative study for the 534 customers from many restaurants and coffee shops in Phitsanulok Province. The researcher did data analysis by percentage, mean, SD, CV, and structural equation model analysis by AMOS.

Referring to the research findings, it was found as follows: 1) the exploratory factor analysis for Social Commerce Model consisted of three components - Conversation, Community, and E-Commerce 2) as for confirmatory factor, the model for Social Commerce was aligned with the empirical data (χ^2 = 80.316, df = 49, p-value = 0.102, χ^2/df = 1.263, GFI = 0.982, AGFI = 0.971, CFI = 0.99, RMSEA = 0.022) and it was also found that Community had the highest score (0.917), followed by E-Commerce (0.798) and Conversation (0.783). Referring to the findings, it was concluded that the Community is the most influential factor to Social Commerce, followed by E-Commerce and Conversation respectively.

Keywords: Social Commerce; Conversation; Community; E-Commerce; factor analysis

Introduction

The advanced social media and Web 2.0 has significantly affected customer behavior from previously as one communication to two-way communication which the customers can create content and have the interactive and real-time online conversation with the buyers. This intriguing phenomenon has caused the increasing E-Commerce. Consequently, in both E-Commerce and Social Commerce, the entrepreneur necessarily adjusts themselves by applying new programs or platforms in order to increase efficiency and sustain the business growth. For example, the Social Commerce can integrate the advantages from both social media and Web 2.0 to boost up the social interactivity in Community and provide opportunities for User-Generated Content so that customers can exchange and share information among each other in Community which chiefly leads to online referral to products accordingly (Huang and Benyoucef, 2015).

Typically, the traditional Electronic Commerce focused on maximizing the business efficiency rather than users. Due to the one-way communication, it was difficult to bounce information from each customer to the others or even to entrepreneur. Since the highlighted activity to stimulate the Commerce was the conversation which the customers could share information and experience and let the others do "Like" and/ or "Share" contents. Nevertheless, nowadays Social Commerce has been rapidly used not only to extend the E-Commerce but also to establish the real-time transaction as well as to build the customer relationship within the Community. This strategic platform can strengthen customer relationship and ensure the sustainable profitability by providing two-way communication which customers can always express and share their opinion more freely.

The restaurants and coffee shops in Phitsanulok Province was the great examples of those who apply Social Commerce in creating information in Community as simulated store front where customers could order and gain any update information and promotion campaigns as well as build relationship with each other. This could really increase satisfaction to the online customers and also facilitate the entrepreneur in building and sustaining customer relationship with the regular customers. (https://thai.tourismthailand.org, accessed on Feburary 25, 2018)

In the past, the restaurants and coffee shops in Phitsanulok Province faced issues in three major areas -- (1) few Community in restaurants and coffee shops in terms of quality of promise to customers, following to the promise to customers, measuring customer satisfaction in after-sales services, and customer satisfaction towards the management of restaurants and coffee shops, etc. (2) unsupported Conversation e.g. experience sharing among customers, setting on direct review or suggestion on restaurants and coffee shops to online friends, reviewing and ranking restaurants and coffee shops, etc. (3) unsupported Electronic Commerce platform for sharing experience of using service to restaurants and coffee shops, asking for recommendation from online friends before deciding to purchase products and service at restaurants and coffee shops, and recommending restaurants and coffee shops to each other.

Since there were few previous research on Community, Conversation, and E-Commerce, this research was to focus on studying Community, Conversation, and E-Commerce as factors for Social Commerce Model for food and beverage business in Phitsanulok Province which was composed of (1) Conversation which focuses on two-way communication among customers or between customers and entrepreneur (2) Community which was established on online platform and (3) E-Commerce which was developed from the strong relationship in Community and led to the online business. The Social Commerce was relatively aimed at building and sustaining long-term profitability.

The expected results from this study significantly help the entrepreneur of restaurants and coffee shops in Phitsanulok Province apply the concept and practices of Conversation, Community, and E-Commerce in their business to ensure both short-term and long-term profitability. In addition, it was recommended that government promote the policy on Community and promote the digital economy.

Research Objectives

1. Analyze exploratory factors for Social Commerce Model for food and beverage business in Phitsanulok Province
2. Analyze the second order confirmatory factors for Social Commerce Model for food and beverage business in Phitsanulok Province

Research Hypothesis

1. Independent variables can be categorized in exploratory factors for Social Commerce Model for food and beverage business in Phitsanulok province
3. The second order confirmatory factors for Social Commerce Model for food and beverage business in Phitsanulok Province have goodness of fit measure with the empirical data.

Theory and Related Research

Social Commerce

Social Commerce refers to the business activity on social networks such as Facebook, Instagram, Twitter, etc. where users or customers create content by themselves. For example, customers set up ranking or rating satisfaction after using any product as well as giving comment on products on the webpage. Furthermore, they can create product recommendation or new topic on Community or social network which leads to the user referral at the real-time communication (Diao et al., 2015; Zhou et al., 2013; Liang and Turban, 2012; Wigand et al., 2008; Kim and Srivastava, 2007). It has been referred that the Social Commerce Model can be divided into three main layers (Huang and Benyoucef, 2015, Narakorn, 2018, Narakorn and Seesupan, 2018). The most inner one is called "Conversation", followed by the middle layer as "Community", and the most outer as "E-Commerce" as Figure 1.

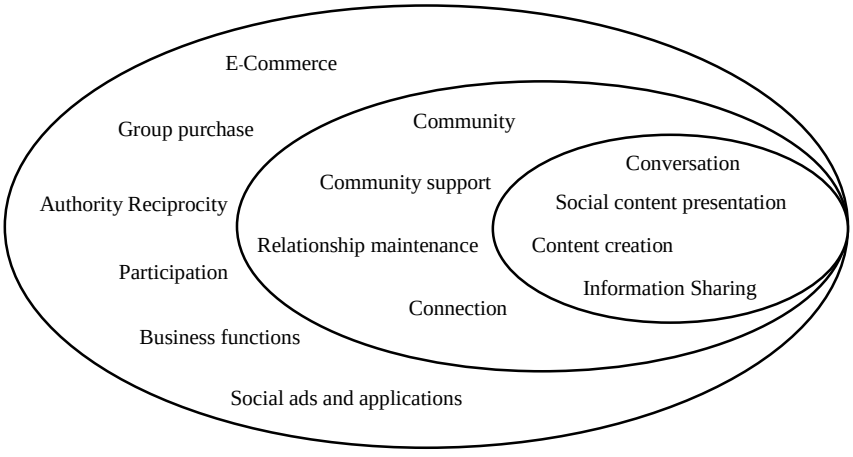

Figure 1: Social Commerce Design Model

1. Conversation means the private opportunity for users to have conversation and dialog to share opinion or experience on product, product ranking, content creation, or information sharing. This is important for selling and marketing purposes. Therefore, sellers and buyers can exchange experience, doing questions and answers on product by online conversation, or eventually doing online business. In particular, the sellers can add the product-related knowledge and experience during conversation with prospect customers as well as post the comment into topics initiated by customers (Han et al., 2011; Koch et al., 2011; Huang and Benyoucef, 2013).

The Conversation can be measured by five observed variables -- (1) your online friends do ranking the restaurants and coffee shops with high creditability (Con1) (2) your online friends recommend restaurants and coffee shops without bias (Con2) (3) your online friends recommend restaurants and coffee shops with high creditability (Con3) (4) By overall, your online friends share experience on restaurants and coffee shops with high creditability (Con4) and (5) your online friends create topics on restaurants and coffee shops with high creditability (Con5) (Hajli, 2015).

2. Community refers to social activity among online users in Community. This occurs when users gradually connect and expand their networks with those who have common interest and become the communities where everyone can have interaction at any time. The activity in Community can be categorized into three types -- (1) community support which refers to providing recommendation to online friends who poste topics or opinion in the online network (2) connection which refers to having interaction with online friends as building and strengthening online relationship in community (3) relationship maintenance which refers to any activities which users do together in the online community which eventually strengthen relationship among them (Hajli, 2014; Chen and Shen, 2015; Liang et al., 2012; Narakorn and Seesupan, 2018; Narakorn and Seesupan, 2019).

The Community can be measured by five observed variables -- (1) restaurants and coffee shops commit to follow the agreement with users with sincerity (Com1) (2) restaurants and coffee shops do their best in keeping agreement with users (Com2) (3) customer satisfy the management of restaurants and coffee shops in social network (Com3) (4) customers feel great

on the management of restaurants and coffee shops in social network (Com4) and (5) customers feel happy on the management of restaurants and coffee shops in social network (Com5) (Hajli and Sims, 2015; Wang and Hajli, 2014; Zhang et al., 2016).

3. E-Commerce refers to the online business in social media which is definitely accessible and serves customer needs at the real time. The characteristics of online business is to convince the online friends who have common interest to buy product as group. Moreover, this offers the participation in experiencing the product by "sharing" or "giving Like" which helps promotes the group purchasing at the end (Wu et al., 2015).

The E-Commerce can be measured by four observed variables -- (1) your online friends always recommend restaurants and coffee shops (Mer1) (2) your online friends always share experience in using restaurants and coffee shops (Mer2) (3) your online friends choose targeted restaurants and coffee shops without any hesitation when seeing online posts by any other online friends (Mer3) and (4) you always ask for opinions from online friends before using targeted restaurants and coffee shops (Mer4) (Hajli, 2015; Hew et al., 2016).

Research Method

The researchers conducted this study by quantitative method and Structural Relationship Model (SEM) and divided the study into two main parts - exploratory factor development and confirmatory factor development as following detail:

1. The exploratory factors were firstly developed by creating factor model from related documents and research. After that the researcher used the model in developing the research framework which relatively led to developing questionnaire which was distributed to targeted participants - the online users in Thailand. The collected data will be analyzed by the Exploratory Factor Analysis (EFA) in SPSS.

2. The confirmatory factors were initially developed by using exploratory factors from No. 1 as main framework to develop questionnaire which was distributed to targeted participants - the online users in Thailand. The

collected data will be analyzed by the Second Order Confirmatory Factor Analysis (2nd Order CFA).

Population and Sample Size - The population in this study was customers to restaurants and coffee shops in Phitsanulok Province. Moreover, according to Hair et al., (2010) which suggested that the optimal number of sample group is 10-20 times of the observed variables, due to 14 items in this research, the appropriate sample group were 140-240 participants. This is aligned to what Comrey and Lee (1992) recommended that the sample size of 500 participants is ranked as excellent level. As a result, the number of 534 in this research was highly reliable.

Research Tool - The questionnaire in this research could be divided into three parts (1) basic information of targeted participants (2) customer behavior in using social network and (3) Social Commerce Model which consists of Conversation, Community, and E-Commerce.

Data Collection - The researcher collected data by two-stage stratified sampling scheme and simple random sampling at 9 districts in Phitsanulok Province (Mueang Phitsanulok, Nakornthai, Conversation Trakan, Bang Rakam, Bang Krathum, Phrom Phiram, Wat Bot, Wang Thong, and Noen Maprang)

Data Analysis - This could be divided by research objectives into two parts as follows:

1. Exploratory factor analysis to customers to restaurants and coffee shop by Maximum likelihood and Varimax rotation by SPSS

2. Confirmatory factor analysis to customers to restaurants and coffee shops by the Second Order Confirmatory Analysis by AMOS

Research Findings

According to the sample size, it was found as follows: most respondents were female, were 29.58 years old at average, had monthly income between 10,000-19,999 Baht (31.10%) followed by those who had monthly income less than 10,000 Baht (29.00%) and had monthly income between 20,000– 29,999 Baht respectively.

Research Objective 1: Result of the Explore Factor Analysis (EFA) for the Social Commerce Model for restaurants and coffee shops in Phitsanulok Province

1. According to Kim and Mueller's principle, the researcher analyzed the reliability of variables by Kaiser-Meyer-Olkin Measure of Sampling Adequacy and found that KMO was 0.920 which means that the variables were valid to be used in data analysis at extensively high level (remark: it requires more than 0.800). In addition, referring to Bartlett's Test of Sphericity, it was found that all variables had inter-correlated at 0.000 level of statistical significance. This definitely indicates that variables were valid for being used in the research.

2. Referring to the Principle Component Analysis, it could be found that the communality among all 14 variables in Social Commerce Model for restaurants and coffee shops in Phitsanulok Province was between 0.553 - 0.716. This value refers to the medium to high level which could be used in any components in the research.

3. The result of Orthogonal Rotation by varimax was shown as table 1.

Table 1: The Value of Component in Social Commerce Model by Varimax Rotation (n=534)

No.	Question	Factor		
		Conversation	Community	E-Commerce
1	Con2	**.731**	.273	.147
2	Con4	**.670**	.299	.152
3	Con3	**.661**	.209	.250
4	Con5	**.612**	.259	.217
5	Con1	**.578**	.276	.225
6	Com3	.282	**.691**	.154
7	Com4	.236	**.680**	.284
8	Com5	.249	**.668**	.266
9	Com2	.281	**.535**	.272
10	Com1	.364	**.528**	.247
11	Mer2	.198	.315	**.753**
12	Mer3	.138	.179	**.618**
13	Mer1	.244	.324	**.595**
14	Mer4	.207	.141	**.586**

According to Exploratory Factor Analysis (EFA), the first component was named as Conversation which includes questions Con1, Con2, Con3, Con4 and Con5. The second component was titled as Community which consists of questions Com1, Com2, Com3, Com4 and Com5. The third component was E-Commerce which was composed of 4 questions -- Mer1, Mer2, Mer3 and Mer4.

Research Objective 2: Result of Confirm Factor Analysis for Social Commerce Model for restaurants and coffee shops in Phitsanulok Province.

It was found that the Social Commerce which consists of three main components acquired the standard solution (λ) between 0.783 - 0.917 which indicated that Community was the highest score (0.917) followed by E-Commerce (0.797) and Conversation (0.783) respectively as table 2.

Table 2: Factor Loading Score Presented as Standardized Score for Social Commerce Model after Adjusting Model (n=534)

Component	Social Commerce Model	Factor Loading (λ)	R^2
Conversation		**0.783**	**0.616**
Con1	Your online friends do ranking the restaurants and coffee shops with high creditability	0.683	0.466
Con2	Your online friends recommend restaurants and coffee shops without bias	0.755	0.570
Con3	Your online friends recommend restaurants and coffee shops with high creditability	0.740	0.547
Con4	By overall, your online friends share experience on restaurants and coffee shops with high creditability	0.743	0.552
Con5	Your online friends create topics on restaurants and coffee shops with high creditability	0.711	0.506
Community		**0.917**	**0.840**
Com1	Restaurants and coffee shops commit to follow the agreement with users with sincerity	0.641	0.411

Table 2: (Continued)

Component	Social Commerce Model	Factor Loading (λ)	R^2
Com2	Restaurants and coffee shops do their best in keeping agreement with users	0.675	0.455
Com3	Customer satisfy the management of restaurants and coffee shops in social network	0.786	0.618
Com4	Customers feel great on the management of restaurants and coffee shops in social network	0.763	0.582
Com5	Customers feel happy on the management of restaurants and coffee shops in social network	0.744	0.554
E-Commerce		**0.797**	**0.636**
Mer1	Your online friends always recommend restaurants and coffee shops	0.739	0.547
Mer2	Your online friends always share experience in using restaurants and coffee shops	0.840	0.706
Mer3	Your online friends choose targeted restaurants and coffee shops without any hesitation when seeing online posts by any other online friends	0.629	0.396
Mer4	You always ask for opinions from online friends before using targeted restaurants and coffee shops	0.617	0.381

Referring to table 3, it was found that according to the goodness fit measure between Social Commerce Model and empirical data, the ratio of χ^2/df was 1.263 which means to pass the criterion (remark: criterion is less than 3). In addition, it could be found that GFI (0.979), AGFI (0.966), and CFI (0.996) passed the criterion (remark: criterion is more than 0.9) as well as RMSEA (0.022) (remark: criterion is 0.021). Consequently, it could be concluded that the components of Social Commerce Model had goodness fit with empirical data as illustrated in Figure 2.

Table 3: Summary of Component Fit Measure Between Social Commerce Model and Empirical Data

Index	Criteria	Value	Result
p-value	> 0.05	0.095	Passed
χ^2/df	< 3	1.263	Passed
GFI	> 0.90	0.979	Passed
AGFI	> 0.90	0.966	Passed
CFI	> 0.90	0.996	Passed
RMSEA	< 0.05	0.022	Passed

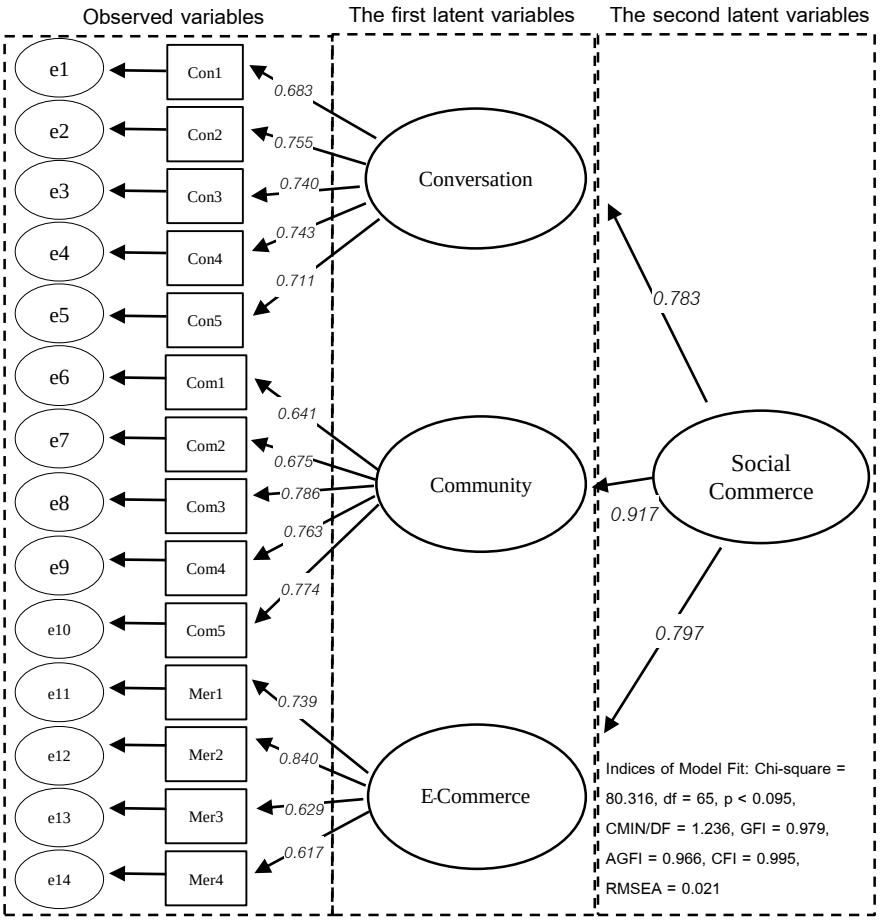

Figure 2: Social Commerce Model (post-adjustment)

Conclusion and Discussion

The component model had goodness fit with empirical data. This could also ensure that there should be three main components in Social Commerce Model as follows:

Community: The respondents focused on online community (λ = 0.917). This really means to the quality of relationship among online users which definitely helps all of them connected and sustain relationship among each other. Typically, it could be referred that human being is social animal which needs the group living and supports for each other by giving recommendation, providing information for problem-solving as well as listening for feedback or opinion from others. This result was significantly aligned with Huang and Benyoucef (2015) and Wu et al., (2015)

Wu et al., (2015) proposed that Community is the key component of Social Community and Community as the place where all members can have conversation, build relationship, and exchange and keep update information among each other. Lin and Huang (2012) and Liao et al., (2013) indicated that Community is the social group which significantly becomes Social Ties that connects people from different locations by internet and leads to the Social Exchange, the commonality in community objectives, characteristics, interests, and identity. Referring to the findings from this research, the Community plays a major role in Social Commerce.

E-Commerce: The respondents considered E-Commerce second priority (λ = 0.797). One of the keys was to make group purchasing by user participation since the main online activities are to view product review from friend ranking, comment, recommendation, and experience sharing. This phenomenon was aligned with Huang and Benyoucef (2015) and Wu et al., (2015)

The E-Commerce is the vital element to the Social Commerce as it provides the sellers the great opportunity for offering their products in Community, giving product information to online customers and friends, which help promote the product image and creditability. In addition, this really makes the buyers more convenient as to be additional channel to sales which

the customers can seek for information and order the products all the time (Wu et al., 2015). As research findings, the researcher concluded that E-Commerce is the crucial component of Social Commerce, following the Community.

Conversation: The respondents regarded Conversation as last priority (λ = 0.783). In the Conversation, users could freely create content, present and share information among each other. The main online activities were to directly present products for their online friends, exchange or share information or experience in using products, and recommend new products accordingly with high creditability. Additionally, users could easily generate new content such as product ranking or sharing their comment on products. These activities were in line with Huang and Benyoucef (2015) and Wu et al., (2015)

The Conversation is significant component of Social Commerce as providing the sellers the opportunity to conduct the Conversation with the customers as well as promptly share information with each other and keep maintaining any interesting discussion topics (Wu et al., 2015). Referring to the research findings, it could be concluded that the Conversation is the important element to Social Commerce, following Community and E-Commerce respectively.

Recommendation

For the online sellers

As the research conclusion that the Community is the most vital component of Social Commerce, followed by E-Commerce and Conversation, it is recommended that the online sellers should build the Community so that all members can have the Conversation, share information among each other, which finally builds and strengthens relationship (Lin and Huang, 2012; Liao et al., 2013).

As national policy

1. For public sector: it is suggested to develop policy for (1) building the infrastructure and networks to technology and communication to support the Community (2) setting the governmental agency which monitors the

Information accuracy and security for the online information in order that Thai users could utilize the information more appropriately and effectively.

2. For private sector: it is recommended that the online entrepreneur set up the Community where the sellers and customers can build and strengthen the relationship with each other.

Limitations of the study

The sample group of this study is the customers who buys any kinds of products. In the next research, it is advisable that the researcher should narrow the scope of study into more specific product or industry in order to gain the more insightful findings and results.

For application

1. It is recommended that in order to design Social Commerce Model, the researcher should clarify which components should be focused – Conversation, Community, or E-Commerce
2. In designing Social Commerce Model, it is necessary to understand customer behavior in order to design the model as the specific needs.

For research

It is advisable to develop the curriculum or designing process for Social Commerce which utilize the result of this research.

Reference

Ahmad, S. N. and Laroche, M. (2016) Analyzing electronic word of mouth: A social commerce construct. *International Journal of Information Management*: 1-12.

Bai, Y., Yao, Z. and Dou, Y-F. (2015) Effect of social commerce factors on user purchase behavior: An empirical investigation from renren.com. *International Journal of Information Management* 35: 538-550.

Baron, R. M. and Kenny, D. A. (1986) The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology* 51(6): 1173-1182.

Chen, J. and Shen, X.-L. (2015) Consumers' decision in social commerce context: An empirical investigation. *Decision Support Systems* 79: 55-64.

Comrey, A. L. and Lee, H. B. (1992) *A first course in factor analysis*. Hillsdals. NJ: Erlbaum.

Dholakia, R. R. and Zhao, M. (2008) Retail web site interactivity: How does it influence customer satisfaction and behavioral intentions? *International Journal of Retail & Distribution Management* 37(10): 821-838.

Diao, Y., He, Y. and Yuan, Y. (2015) Framework for Understanding the Business Model of Social Commerce, *International Journal of Management Science* 2(6): 112-118.

Electronic Transactions Development Agency, Ministry of Information and Communication Technology (2016) *The report of internet user behavior survey 2016.* [Online URL: www.etda.or.th/publishing-detail/thailand-internet-user-profile-2016-th.html] accessed on April 19, 2017.

Guo, B. and Zhou, S. (2016) Understanding the impact of prior reviews on subsequent reviews: The role rating volume, variance and reviewer characteristics. *Electronic Commerce Research and Application* 20: 147-158.

Gwebu, K. L. Wang, J. and Guo, L. (2014) Continued usage intention of multifunctional friend networking services: A test of a dual-process model using Facebook. *Decision Support Systems* 1: 1-12.

Jim Wu, Y-C., Shen, J-P. and Chang, C-L. (2015) Electronic Service Quality of Facebook Social commerce and Collaborative learning. *Computers in Human Behavior* 51: 1395-1402.

Jung, H-J. and Cho, J-S. (2016) The Effects of Characteristics of Social Commerce have on Customers' Purchase Decisions. *The Business and Management Review* 7(3): 8-16.

Hair, J.F., Black, W.C., Babin, B.J and Anderson, R.E. (2010) *Multivariate Data Analysis, 7th ed*. Prentice Hall: Upper Saddle River NJ.

Hajli, N. (2014) The role of social support on relation quality and social commerce. *Technology Forecasting & Social Change* 87: 17-27.

Hajli, N. (2015) Social commerce constructs and consumer's intention to buy. *International Journal of Information Management* 35: 183-191.

Hajli, N., Lin, X., Featherman, M. and Wang, Y. (2014) Social word of mouth: How trust develops in the market. *International Journal of Marketing Research* 55(5): 1-17.

Hajli, N. and Sims, J. (2015) Social commerce: The transfer of power from sellers to buyers. *Technological Forecasting & Social Change* 94: 350-358.

Han, Y. S., Choi, J. K. and Ji, Y. G. (2011) A study on social network services visualization based on user needs. In *Online Communities and Social Computing. OCSC 2011. Lecture Notes in Computer Science, vol 6778,* edited by Ozok, A. A. and Zaphiris, P., pp. 319-325. Berlin: Springer.

Hew, J-J., Lee, V-H., Ooi, K-B. and Lin, B. (2016) Mobile social commerce: The booster for brand loyalty? *Computers in Human Behavior* 59: 142-154.

Huang, Z. and Benyoucef, M. (2015) User preference of social feature on social commerce websites: An empirical study. *Technology Forecasting & Social Change* 95: 57-72.

Kirk, P. C., Chiagouris, L. and Gopalakrishna, P. (2012) Some people just want to read: The roles of age, interactivity, and perceived usefulness of print in the consumption of digital information products. *Journal of retailing and consumer services* 19: 168-178.

Kim, Y.A. and Srivastava, J. (2007) Impact of social influence in E-Commerce decision making. *Proceedings of the ninth international conference on electronic commerce*: 293-302.

Koch, G., Füller, J. and Brunswicker, S. (2011) Online crowdsourcing in the public sector: how to design open government platforms. In *Online Communities and Social Computing. OCSC 2011. Lecture Notes in Computer Science, vol 6778*, edited by Ozok, A. A. and Zaphiris, P., pp. 203-212. Berlin: Springer.

Kucukcay, I. E. and Benyoucef, M. (2014) Mobile Social Commerce Implementation. *Proceedings of the 6th International Conference on Management of Emergent Digital EcoSystems*: 1-8.

Zhou, L., Zhang, P. and Zimmermann, H. D. (2013) Social commerce research: An integrated view. *Electronic Commerce Research and Application* 12(2): 61-68.

Lal, P. (2017) Analyzing determinants influencing an individual's intention to use social commerce website. *Future Business Journal* 3: 70-85.

Liang, T-P., Ho, Y-T., Li, Y-W. and Turban, E. (2012) What Drives Social Commerce: The Role of Social Support and Relationship Quality. *International Journal of Electronic Commerce* 16(2): 69-90.

Liang, T-P. and Turban, E. (2012) Introduction to Special issue Social Commerce: A Research Framework for Social Commerce. *International Journal of Electronic Commerce* 16(2): 5-13.

Liao, C., To, P-L. and Hsu, F-C. (2013) Exploring knowledge sharing in virtual communities. *Online Information Review* 37(6): 891-909.

Lin, F-R. and Huang, H-Y. (2012) Why people share knowledge in virtual communities? *Internet Research* 12(2): 133-159.

Lina, Z., Ping, Z. and Hans-D, Z. (2013) Social commerce research: An integrated view. *Electronic Commerce Research and Application* 12: 61-68.

Montree, P. (2015) Moderator and mediator in Structural Equation Modeling. *The Journal of Industrial Technology* 11(3): 83-96.

Morgan, R.M. and Hunt, S.D. (1994) The commitment-trust theory of relationship marketing. *Journal of Marketing* 58: 20–38.

Narakorn, P. (2015) *The influence of Flow, Trust in Members, and Social Network Site Identity as Mediating Factors in Interactivity and User Engagement in Online Purchase Group Outcomes and Electronic Loyalty*. Bangkok: Ramkhamhaeng University.

Narakorn, P. (2018) Relationship Quality and Social Support as the Mediating Role Between Social Commerce Constructs and Continuance Intention. *Journal of Management Science Chiangrai Rajabhat University* 13(1): 44-69.

Narakorn, P. and Seesupan, T. (2018a) The influence of social network site identity, active control, flow, trust in members and customer loyalty of Facebooks users. *Silpakorn University Journal* 38(2): 121-145.

Narakorn, P. and Seesupan, T. (2018b) Trust in Seller Catalyst Social Commerce Construct to Continuance Intention. *Journal of Business Administration* 41(159): 24-44.

Narakorn, P. and Seesupan, T. (2019) Social Commerce Constructs and Buyer-Seller Relationship Quality. *Modern Applied Science* 13(2): 169-176.

Nunnally, J. (1978) *Psychometric Theory*. New York: McGraw-Hill.

Ogara, S. O., Koh, C.E., & Prybutok, V. R. (2014) Investigating factors affecting social presence and user satisfaction with Mobile Instant Messaging. *Commuters in Human behavior* 36: 453-459.

Oliver, R. (1999) Whence consumer loyalty? *Journal of marketing* 63:33-44.

Shanmugam, M., Sun, S., Amidi, A., Khani, F. and Khani, F. (2016) The applications of social commerce construts. *International Journal of Information Management* 36: 425-432.

Wang, Y. and Hajli, M. N. (2014) Co-Creation in Branding through Social Commerce: The Role of Social Support, Relationship Quality and Privacy Concerns. *Twentieth Americas Conference on Information Systems, Savannah*: 1-16.

Wigand. R.T., Benjamin, R.I. and Birkland, J. L.H. (2008) Web 2.0 and beyond: Implications for electronic commerce. *Proceedings of the 10th*

international conference on electronic commerce, Innsbruck, Austria: 1-6.

Wu, J., Xu, M., Mo, Z. and Liao, L. (2015) The research of design based on social commerce. *International Journal of Social Science Studies* 3(4): 157-165.

Zhang, K.Z.K., Benyoucef, M. and Zhao, S. J. (2016) Building brand loyalty in social commerce: The case of brand microblogs. *Electronic Commerce Research and Applications* 15: 14-25.

Zhang, P. and Benjamin, R. I. (2007) Understanding information related fields: A conceptual framework. *Journal of the American Society for Information Science and Technology*. 58(13): 1934-1947.