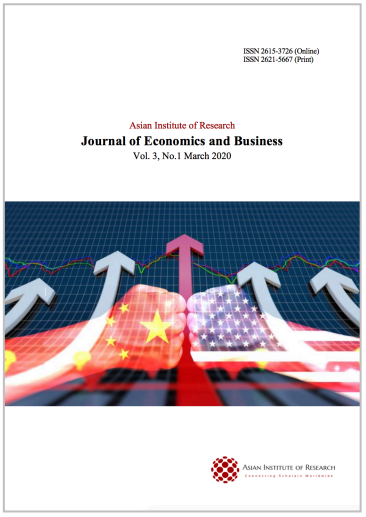

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Community Buyers' Affective Reactions in Social Commerce: Stimuli and Response

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Abstract
Based on the S-O-R model, the purpose of this study is to probe the roles of community buyers' affective reactions (trust and perceived risk from social commerce) in relationships between five stimuli and consumer engagement in social commerce (CESCI). Integrating prior studies in the social commerce field develops a conceptual model and 12 hypotheses. All data collected from the target population in Taiwan are analyzed through two-step structural equation modeling (SEM) to examine the hypotheses. Of 12 hypotheses, only eight hypotheses are supported and findings confirm the antecedents and outcomes of community buyers' affective reactions in social commerce. Besides the need for empirical confirmation of the hypotheses given, finally, there are several practical implications for social marketers and future research directions for scholars.

Keywords: S-O-R Model, Affective Reactions, Consumer Engagement in Social Commerce Intention

1. Introduction

Social commerce has dramatically impacted the global economy through social media. Not only has social media revolutionized our way of life with chat-based applications (Beig & Khan, 2018; Filo *et al*., 2015), but has also reconstructed the traditional e-commerce mode (Charoennan & Huang, 2018; Gambetti *et al*., 2015). Moreover, social media continues to offer opportunities for brands to connect with consumers in new and interesting ways, across a wide variety of platforms. Through social media (e.g. Facebook, Twitter, Instagram, Line, WeChat, and Weibo, etc.), for example, not only can people engage in entertaining activities (e.g. watching videos and playing games), social interactions, and professional networking, but can also engage in a variety of user-centered business activities, so-called social commerce (Yin *et al*., 2019). Hoffman and Fodor (2010) point out that not only is social commerce a subset of electronic commerce involving a two-way interactive social media, but is also online media supporting social interaction and user contributions to assist online buying and selling of products and services. More succinctly, social commerce is the use of social network(s) in the context of e-commerce transactions. Based

on Statista (2019), as of March 2019, worldwide revenue in the online commerce market amounted to around US two trillion dollars, and is expected to show an annual growth rate (2019–2023) of 8.9%. Statista (2019) further points out online commerce had 56.2% user penetration as of March 2019 and is expected to hit 61.8% by 2023. This is because the power of social networking is such that the number of worldwide users is expected to reach some 3.02 billion monthly active social media users by 2021, around a third of Earth's entire population. Furthermore, social media now has a global penetration rate of 45% (Statista, 2019).

Social media and social commerce are important for both of companies and consumers. Companies adopt social media as a marketing tool to build relationships and communicate with consumers through personal channels of networking and interactivity (Beig & Khan, 2018). Due to enabling companies to reach a large audience at low costs, build brand image and brand awareness, spread social word of mouth (sWOM), as well as improve brand loyalty, social media offers companies great ROI by increasing sales and profits (Hajli, 2018; Hajli *et al*., 2014). For consumers, for example, social media can provide a channel to consumers for direct communication with firms and other consumers in communities as well as increase the bargaining power of the community and the benefit to lower their transaction costs. Exchanging ideas and information through social media influences on opinions, awareness, and purchase decision-making of consumers (Kim & Ko, 2012).

On average, global internet users spend some 135 minutes per day surfing social networks (Statista, 2019), and social referral to retail ecommerce sites has grown 110% in two years outpacing all other referral channels (eMarketer, 2019). However, it still represents a modest percentage of inbound ecommerce traffic, accounting for only 9.1% in Q1 2019 (eMarketer, 2019). The result indicates that numerous consumers prefer to traditional shopping. This may be because some consumers still consider social media as a platform to interact with other users and engage in entertaining activities. Pavlou and Gefen (2005), moreover, point out the past negative experiences of consumers or negative WOMs reduce consumer engagement in social commerce intention. For example, six common sources of contract violation with online sellers, including fraud, product misrepresentation, contract default, product delivery delay, product guarantees, and payment policy lead consumers to increase the level of risk perception and not trust in community sellers, and then further discourage consumers from engagement in social commerce (Koh *et al*., 2004).

Taiwan owns the advanced Internet infrastructures, and Taiwanese prevalently adopt social media (e. g. Facebook, YouTube, Line, Messenger, and Instagram, etc.) to interact with each other. Based on SlideShare (2019), there were 19 million active community users in Taiwan in 2018, accounting for 80% of the total number of people in Taiwan. Of these users, 18 million users are used to social media on mobile phones. Not only do these users adopt social media to interact with their friends, family, and colleagues, but also use them to purchase products and services. Moreover, companies and individual sellers adopt the social media to advertise or sell their products and services. In Taiwan, however, a lot of dispute transactions emerge in social commerce (SlideShare, 2019). Therefore, an empirical illustration of this study is focused on the social commerce in Taiwan. Prior studies, additionally, point out many factors influence consumer behavior on social media, but prior studies point out community users place more emphasis on social interactivity (Hajli, 2018; Liang *et al*., 2011; Park *et al*., 2014; Shanmugam *et al*., 2016; Sozer, 2019), information credibility (Hajli, 2018; Hajli *et al*., 2014; Li & Suh, 2015), security issues (Afshan & Sharif, 2016; Gefen *et al*., 2003; Pantano & Di Pietro, 2012), social identification (Carvalho & Fernandes, 2018; Pai & Tsai, 2011; Tidwell, 2005; Wu & Li, 2018), and a buyer's perceived past negative experience (PPNE) (Pavlou & Gefen, 2005). The present study, in consequence, considers the five factors (social media interactivity, perceived information credibility, perceived security, social identification, and PPNE as environmental stimuli influencing trust and risk perception level of buyers in social commerce.

Based on the S-O-R model, empirical illustration of this study is to investigate stimuli and response of community buyers' affective reactions (trust and perceived risk from social commerce) in social commerce. To accomplish these objectives, therefore, the present paper is organized as follows: through literature review and integration in several relevant fields, first of all, the paper derives research hypotheses and develops a conceptual model. Through structural equation modeling (SEM), next, all data collected from the target population in Taiwan are analyzed. Finally, the findings are presented, followed by conclusions and discussions of the findings including several practical implications and future research directions.

2. Literature Review

2.1 The S-O-R Model

In the consumer behavior context, not only does the S-O-R model by Mehrabian and Russell (1974) describe how people react to stimuli in the environment by using three steps: stimulus (S), organism (O), and response (R), but also points out that environmental stimuli (S) lead two contrasting forms of responses (R) in the consumer: approach or avoidance. From psychological aspects, Mehrabian and Russell (1974) illuminate that the two behaviors are generated by the people's internal evaluations (O) of the different cues in the environment. Wu and Li (2018) further expound that the S-O-R model was originally designed for general environmental psychology, but it has been popularly applied and verified to work in marketing and e-commerce literature. Wu and Li (2018), for example, adopt the S-O-R model to verify that six social commerce marketing mix (ACMM) cues (S) of social media impact customer value (O) in social commerce, which then influence customer loyalty (R) in social commerce. Of interest to this study is to develop a framework for explaining the formation of consumer purchase intention in social commerce. Based on the S-O-R model, therefore, the study will examine how five stimuli affect community buyers' affective reactions (O), which in turn influence consumer engagement in social commerce intention (R).

2.2 Trust, Perceived Risk, and Consumer Engagement in Social Commerce Intention

Based on the study by Pavlou and Gefen (2005), consumer engagement in social commerce intention (CESCI) is defined as the degree to which consumers engage in a variety of user-centered and paid business activities through social media. In the commitment-trust literature, not only is trust defined as the trustee will fulfill the trustor's expectations without taking advantage of its vulnerabilities (Gefen *et al*., 2003), but is also the most important variable in social (Pavlou & Gefen, 2005) and relational exchanges (Hunt & Lambe, 2000). Mayer *et al*. (1995) also consider trust as "the willingness of a person to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor another party" (p. 312). However, lack of more information about products or services in social commerce will make consumers undergo information asymmetry and further lead to either hinder them from engagement/payment or arouse transaction disputes (Yin *et al*., 2019). In the study, therefore, trust in social commerce is defined as a buyer's belief that future transactions with sellers in social commerce will occur in a manner consistent with their confident expectations (Pavlou & Gefen, 2005). Not only can trust reduce the uncertainty of transactions and complexity of communication with sellers, but can also further prompt the success of transactions (Shanmugam *et al*., 2016). Based on the study by Delgado-Ballester *et al*. (2003), trust is able to influence consumer choices and behaviors, because of trust as a psychological state interpreted in terms of perceived probabilities, confidence, or expectations in relation to the other party. In this study, in consequence, trust in the S-O-R model is considered as individual internal evaluations (organism). Findings of the empirical study by Yin *et al*. (2019), for example, point out the higher the level of trust in community of sellers, the stronger consumer purchase intention. The findings are in line with the studies by Pavlou and Gefen (2005) and Rehaman *et al*. (2019). In the study, therefore, the impact of trust on consumer engagement in social commerce intention must be replicated and the hypothesis is framed as follows:

H_1: Trust in SC positively influences CESCI.

In consumer behavior context, perceived risk (PR) refers to a psychological uncertainty occurred during consumption when consumers are unable to make sure the results of products or services that meet their needs (expectations) or the results have adverse or harmful results (Aven & Renn, 2009; Dowling & Staelin, 1994). Featherman and Pavlou (2003) point out suffering a loss in pursuit of a desired outcome will lead consumers to bring about the subjective belief - perceived risk. Unlike face-to-face transactions, for example, social commerce leads consumers to expose individual information, including banking information and contact messages on social media. The private personal information may be illegally used or sold by community sellers (Yin *et al*., 2019). In online marketplaces, moreover, failure of sellers in social commerce to adequately fulfill their contractual obligation will increase the PR level of consumers (Pavlou & Gefen, 2005). In the study, not only is PR defined

as the buyer's subjective belief that there is a probability of suffering a loss when pursuing transactions with sellers in social commerce (Pavlou & Gefen, 2005), but is also viewed as individual internal evaluations (organism). Jarvenpaa *et al*. (2000) conduct the empirical analysis and find that PR is one important element of buyer-seller relationships. This is because PR is able to reduce the buyer's inclination to engage in online transactions. In the study by Yin *et al*. (2019), however, empirical analysis of data collection from China and France group reveals no impact of PR on purchase intention of users in social commerce. In order to further identify the relationship between PR from SC and CESCI, therefore, the hypothesis is proposed as follows:

H_2: PR from SC negatively influences CESCI.

2.3 Social Media Interactivity, Trust in SC, and PR from SC

Based on the study by Hajli (2018), social media interactivity (SMI) refers to "social interaction of people in social networking developed by Web 2.0 technologies such as online communities which empower people to have some interaction with their peers" (p.800). Alba *et al*. (1997) further point out that interactivity is decomposed into two dimensions, including reciprocity and control. Not only does reciprocity means interaction should mutual and the information which is exchanged should be related, but also has no delay in communicating back to the other person or entity. Control means that an interactive website should empower a user to have some control over the information (Alba *et al*., 1997). In the study, SMI is described as a digital platform where the like-minded users interact with each other through discussions, suggestions on specific products/services, or sellers and express their views on specific issues (Muntinga *et al*., 2011).

Through information exchange and discussions, SMI can lead users to accept the views of other community members and further enhance the degree of intimacy between users in online communities (Park *et al*., 2014). Researchers also reveal that the higher the degree of intimacy, the stronger the emotional support of consumers from online communities (Liang *et al*., 2011). Findings of the empirical studies point out not only can emotional support help build trust in close friends in the community (Shanmugam *et al*., 2016), but can also further improve consumer purchase decision-making (Ng, 2013). Chiu *et al*. (2018), however, point out trust promoted by SMI in the community unnecessarily implies a sense of trust in SC. In order to bridge the gap, therefore, the hypothesis is proposed as followed:

H_{3a}: SMI has a positive impact on trust in SC.

Due to uncertainty avoidance, and unpredictable outcomes of social commerce, however, risk perception of consumers increases, followed by leading consumers to pay more attention to searching information in order to clarify the consequences and consequently reducing the PR level (Kellerman & Reynolds, 1990). As mentioned above, social interaction can promote communication among community members and further lead to a reduction in risk perception level. Through social interaction, for example, community users provide their feedback and share their opinions with other users to obtain required information and further diminish the uncertainties and PR level about purchase decisions (Sozer, 2019). In the social commerce context, therefore, SMI may be viewed as an antecedent of PR from SC, and then the hypothesis is proposed as follows:

H_{3b}: SMI has a negative impact on PR from SC.

2.4 Perceived Information Credibility, Trust in SC, and PR from SC

In the information system literature, due to the message receivers' perception on the credibility of a message, perceived information credibility (PIC) is considered as a crucial driver of receiver information adoption (Cheung & Thadani, 2012; Li & Suh, 2015). In social networking context, not only is PIC defined as the extent to which individuals perceive information to be believable, but is also a strong predicator of information readers' future actions, such as recommendation or willingness to adopt viewpoint of the received information (Li & Suh, 2015). However, the lack of credibility in information will lead consumers to lower confidence in and increase PR level from social commerce of sellers (Hajli, 2018; Pavlou & Gefen, 2005). That is, inaccurate information provided by

sellers can decrease trust in social commerce of sellers, increase PR level, and then further lose interest in social commerce. On the other hand, information produced through social media is reflecting a mechanism to provide credibility of the information, then further establish trust and reduce risk perception. The influence of this information is greater than offered by companies or individual sellers (Hajli *et al*., 2014). In social commerce, for example, community buyers are more likely to observe other community members' opinions, rating valance, and rational text review towards products, services, and even sellers in order to reduce uncertainty risk and unpredictable outcomes of transactions. This is because others' opinions represent indirect experience on many sensory aspects (Hajli *et al*., 2014). Moreover, findings of empirical studies reveal the positive effect of information credibility on consumers' decision-making (Awad & Ragowsky, 2008) and purchase intention (Prendergast *et al*., 2010). This may be because not only can the credibility of information strengthen trust among community members, but can also reduce PR from a social media platform (Li & Suh, 2015). Due to involvement in transactions in social commerce, on the other hand, whether PIC increase trust in SC and diminish PR from SC is uncertain. In the social commerce context, therefore, two hypotheses are proposed as follows:

H_{4a}: PIC has a positive impact on trust in SC.

H_{4b}: PIC has a negative impact on PR from SC.

2.5 Perceived Security, Trust in SC, and PR from SC

In the online marketplace, perceived security (PS) is one of the major concerns of social commerce because a lack of transaction safety is one of the main reasons why consumers connect online but do not purchase goods over the internet (Gefen *et al*., 2003). An example of Facebook data scandal is that the US Federal Trade Commission (FTC) has been investigating allegations Facebook inappropriately shared information belonging to 87 million users with the now-defunct British political consulting firm Cambridge Analytica. The FTC in 2019 has approved a roughly $5bn (£4bn) settlement with Facebook over its investigation into the social media company's handling of user data (INDEPENDENT, 2019). Unlike traditional transactions, consumers have to reveal their sensitive information (e.g. phone number, address, and credit card number, etc.) through non-face-to-face transaction when consumers buy products or services on social media platforms. Not only is PS considered as the extent to which one believes that the web is secure to transmit sensitive information (Wang *et al*., 2003), but is also defined as a "circumstance, condition, or event with the potential to cause economic hardship to data or network resources in the form of destruction, disclosure, modification of data, denial of services, and/or fraud, waste, and abuse" (Kalakota & Whinston, 1996, p123). In this study, PS in social commerce refers to the extent to which consumers believe that using social media will be secure (Pantano & Di Pietro, 2012). Security concerns in social commerce occur when consumers have no experience with a digital platform or have undergone negative online transactions. Afshan and Sharif (2016) highlight that security mechanisms provided by social media can lead consumers to believe in the e-retailer and feel confident that their subjective risk has been minimized. Moreover, PS has the higher ability to predict and explain the success of not only internet banking but also of any e-commerce-related website. That is, the higher perceived security, the more consumers feel comfortable and the lower the level of consumer fear, and then further the stronger consumer purchase intention in social commerce. In social commerce context, therefore, two hypotheses are proposed as follows:

H_{5a}: PS has a positive impact on trust in SC.

H_{5b}: PS has a negative impact on PR from SC.

2.6 Social Identification, Trust in SC, and Perceived Risk from SC

Based on social identity theory, social identification (SI) is a person's sense of who they are based on their group membership(s). The groups (e.g. social class, family, football team etc.) which people belonged to were an important source of pride and self-esteem (Tajfel, 1979). Not only does SI refer to the degree to which a community member perceived as belonging to a community, but also in turn occurs in categorization, group polarization, and self-stereotyping (Turner, 1975). Social categorization refers to perception, definition, and recognition of both self

and others as members of distinct social groups (Wu & Li, 2018), while group polarization is "the common, typical, or representative attributes, behavior, and norms that defined and distinguish one group from others are ascertained" (Mackie, 1986, p.720). Finally, self-stereotyping occurs when the perceived characteristics and norms of the group are attributed to the self (Turner, 1975). The study by Tidwell (2005), individuals with higher SI will be more likely to exchange their ideas or benefits on social media and thereby foster cohesiveness among community members. This is because individuals identify with a community, followed by emotionally attaching to a community and then further make value-added contributions to a community where they belong (Tidwell, 2005). The cohesiveness will lead individuals to rely on community members and then further are more likely inclined to support the products, services, or sellers endorsed or recommended by other members while they identify with and become emotionally attached to the community associated with a particular online shopping context (Pai & Tsai, 2011). Findings of the study by Carvalho and Fernandes (2018) indicate moderating effects of identification with social media on the relationship between trust and customer brand engagement. However, the authors have no further explanation for direct effects of SI on trust in social commerce. On the other hand, the cohesiveness increases the frequency of social interaction and enhance the degree of intimacy among community members, followed by trust building among community users as well as reduction in a decrease in the level of risk perception and anxiety from communities. On the other hand, an increase in confidence of consumers among community users and a reduction in PR from communities insufficiently strengthen trust in and diminish PR from social commerce (Chiu *et al*., 2018). In order to bridge the gap, therefore, two hypotheses are proposed as follows:

H_{6a}: SI has a positive impact on trust in SC.

H_{6b}: SI has a negative impact on PR from SC.

2.7 A Buyer's Perceived Past Negative Experience, Trust in SC, and PR from SC

Research reveals that Psychological contract violation (PCV) with the virtual community of sellers is significantly evoked by the buyer's perceived past negative experience (PPNE) (Pavlou & Gefen, 2005). This may be because if a buyer previously encountered problematic transactions with individual sellers in social commerce, then this experience more likely results in PCV with the community of individual sellers, followed by probably discouraging buyers from engagement in social commerce again. Pavlou and Gefen (2005) point out the buyer will probably form a general opinion about the seller community through his or her perceived past negative experience with a small number of sellers. Six main problematic transacting sources in social commerce, including fraud, product misrepresentation, contract default, product delivery delay, product guarantees, and payment policy, lead to PCV with the virtual community of sellers (Koh *et al*., 2004). Not only can PVC ruin a buyer's beliefs that sellers will behave in a manner consistent with their confident expectations, followed by eroding the initial trust that buyers have in the community of sellers (Goles *et al*., 2009; Malhotra *et al*., 2017), but can also create a sense of betrayal and unfair treatment, followed by causing buyers to pay more attention to potential adverse outcomes related to new and potentially opportunistic sellers and increase buyers' perceived risk from transactions with the community of sellers (Hill *et al*., 2009; Pavlou & Gefen, 2005).

In this study, a buyer's perceived past negative experience is defined as the level to which the buyer perceive negatively encounters with particular sellers in social commerce. The level of a buyer's perceived past negative experience, in consequence, basically depends on the perception of a buyer. The present study, as a result, presumes that a buyer's perceived past negative experience has the negative impact on trust in SC and the positive impact on PR from SC. This might be because the higher the level of a buyer's perceived past negative experience, the stronger PCV with the virtual community of sellers, followed by the weaker trust in SC and the stronger PR from SC (Chopdar & Sivakumar, 2018; Malhotra *et al*., 2017; Pavlou & Gefen, 2005). In the social commerce context, therefore, the following two hypotheses are proposed:

H_{7a}: PPNE negatively influences trust in SC.

H_{7b}: PPNE positively influences PR from SC.

2.8 Research Model

Based on the S-O-R model, the conceptual model in this study will examine antecedents and outcomes of community buyers' affective reactions (trust and PR in SC) in CESCI (see Figure 1).

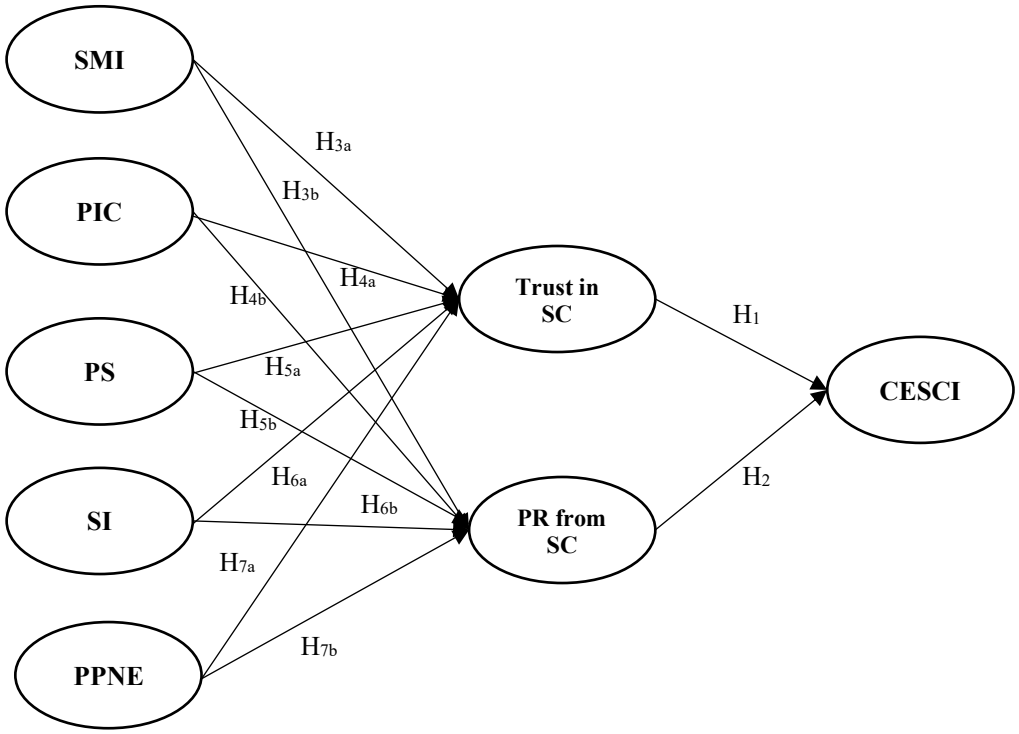

Figure 1. Conceptual Model.

3. Research Method

3.1 The Questionnaire Design and Data Collection

A personally administered questionnaire is used to collect the data from the target population. A total of 35 items made-up the questionnaire which contained nine parts: demographic information, SMI, PIC, SI, PS, trust in SC, PR from SC, a buyer's perceived past negative experience (PPNE), and CESCI. Personal characteristics (6 items) include gender, age, education, occupation, month income, and marital status. An instrument measuring eight constructs are designed according to previous studies. For example, four items measuring SMI are adapted from Hajli (2018). Four items measuring PIC are adapted from Li and Suh (2015). SI (4 items) and PS (4 items) are measured using the scales developed by Wu and Li (2018), and Wang *et al*. (2003), respectively. Trust in SC (4 items), PR from SC (3 items), and a buyer's PPNE (3 items) are measured using the scales adapted from Pavlou and Gefen (2005). Three items, finally, is adapted from Rehman *et al*. (2019) to measure CESCI.

Lissitz and Green (1975) point out Likert-type scales are easily completed by respondents and provide reliability. Therefore, all items in this study are measured on a five-point Likert-scale (1 = strongly disagree, 5 = strongly agree). All items originally in English are translated into Chinese and back-translated into English to ensure equivalent meaning (Brislin, 1980). The questionnaire is also pre-tested using undergraduate business students with social commerce experiences. The feedback from the pre-test is used to improve the readability and the questionnaire. Based on the recommendation of Hair *et al*. (2006), moreover, a reliable sample size is a minimum of five respondents per survey item. The questionnaire in this study had 35 items, which means the minimum number of respondents for factor analysis for this study should be 200. A total of 349 respondents complete the questionnaires.

Due to the high rate of adopting social media in Taiwan, 1,000 questionnaires are randomly distributed at three department stores, two shopping malls, and two hyper markets in two special municipalities, respectively, including Tainan and Taichung in Taiwan. The total population of these two municipalities accounts for about 20% of the population of Taiwan (Dept. of Household Registration, 2018). The questionnaires are conducted face-to-face during over a two-month period from October 1, 2019 to November 30, 2019. At the end of the data collection process, of 392 completed participants, the final number of usable questionnaires is 349, for a response rate of 34.90%. Of the 349 participants, 185 (53.0%) are female and 164 (47.0%) are male. The average age and month income of the 349 participants is 29.5 years and about US$1152.5 based on the US$/NT$ exchange rate of NT$30.37. All data collected from the target population are analyzed through two-step structural equation modeling (SEM) a measurement model and a structural model to establish validity of the instrument and examine the path analysis.

3.2 Analysis of Common Method Variance, Reliability, and Validity

In order to avoid the common method variance (CMV) problem, the study adopts the Harman's one-factor test and the confirmatory factor analysis (CFA) of the single factor to test obscuring the meaning of the measurement items and random ordering the measurement items. Podsakoff and Organ (1986) point out the Harman's one-factor test is viewed as a post hoc remedy for CMV to confirm that no such problem exists. Two factors are extracted from the measurement items. The explanatory power of the first factor is 43.08%, which is less than 50 % and indicates no significant problem of CMV in the sample data. Moreover, the confirmatory factor analysis (CFA) of the single factor shows that the factor loadings of all 29 measurement items are not all significant (above the criteria of 0.5). Next, because GFI, AGFI, and NFI are sensitive to the sample size, the study only presents the results, includingχ^2 / *df* = 10.816, TLI = .452, CFI = .491, PNFI = .435, and RMSEA = .168. In contrary, the goodness-of-fit of the proposed model (including χ^2 / *df* = 2.300; TLI = .937; CFI = .946; PNFI = .783; and RMSEA = .061) is better than that of the single factor. Therefore, the findings indicate no significant CMV problem (Hooper *et al*., 2008).

Through confirmatory factor analysis (CFA), measurement validity is first evaluated, and the result shows an acceptable model fit to the data: χ^2 / *df* = 2.124 ($p < .001$); RMSEA = .057 (< .06); RMR = .049 (< .06); GFI = .901 (> .90); AGFI = .890; CFI = .946 (> .90); NFI = .904 (> .90); TLI = .947 (> .90); IFI = .937 (> .90) (Hair *et al*., 2006). Convergent validity assesses the extent to which items designed to measure the same construct are related, while discriminate validity assesses the degree to which items designed to measure different constructs are related (Hair *et al*., 2006). It is found that standardized factor loadings of all items measuring the same constructs are over .63 and significantly related ($p < .001$) (see Table 1). As shown in Table 1, Cronbach alpha and the composite reliability (CR) for all constructs are larger than 0.7, which the internal consistency and stability of the instrument is acceptable (Nunnally, 1978). Moreover, the average variance extracted (AVE) for all reach constructs of this study exceeds .50 and 0.80. Therefore, convergent validity is established (Fornell & Larcker, 1981). Fornell and Larcker (1981), finally, point out discriminant validity is tested by comparing the shared variance among indicators of a construct with the variance shared between constructs. The test for discriminant validity is met when the square root of AVE for the construct is greater than its correlations with other constructs. As a result, absolute correlation values of all items measuring different constructs are significantly low and range from .00 to .63 (see Table 2). Therefore, discriminant validity is established.

Table 1. Standardized loadings and reliabilities

Construct	Indicators	Standardized loadings	AVE	CR	Cronbach's α
SMI	SMI1	0.634***	0.527	0.815	0.810
	SMI2	0.823***			
	SMI3	0.753***			
	SMI4	0.679***			
PIC	PIC1	0.887***	0.848	0.957	0.957
	PIC2	0.923***			
	PIC3	0.939***			

	PIC4	0.934***			
SI	SI1	0.799***	0.626	0.870	0.868
	SI2	0.869***			
	SI3	0.736***			
	SI4	0.754***			
PS	PS1	0.831***	0.598	0.855	0.853
	PS2	0.746***			
	PS3	0.837***			
	PS4	0.667***			
Trust	Trust1	0.766***	0.714	0.908	0.910
	Trust2	0.757***			
	Trust3	0.910***			
	Trust4	0.931***			
PR	PR1	0.921***	0.798	0.922	0.921
	PR2	0.909***			
	PR3	0.848***			
PPNE	PPNE1	0.646***	0.623	0.830	0.823
	PPNE2	0.902***			
	PPNE3	0.799***			
CSCI	CSCI1	0.810***	0.680	0.864	0.862
	CSCI2	0.793***			
	CSCI3	0.869***			

Note: Goodness-of-fit indices ($N = 349$); χ^2 (348) = 739.165 ($p < 0.001$); RMSEA = 0.057; RMR = 0.049; GFI = 0.901; AGFI = 0.890; CFI = 0.946; NFI = 0.904; TLI = 0.947; IFI = 0.937.
SMI = social media interactivity; PIC = perceived information credibility; SI = social identification; PS = perceived security; PR = perceived risk; PPNE = a buyer's perceived past negative experience; CSCI = consumer social commerce intention.

Table 2. Correlation among constructs and the square root of the AVE

	SMI	PIC	SI	PS	Trust	PR	PPNE	CSCI
SMI	***0.726***							
PIC	0.458	***0.921***						
SI	0.383	0.513	***0.791***					
PS	0.371	0.622	0.561	***0.773***				
Trust	0.357	0.627	0.490	0.614	***0.845***			
PR	-0.090	-0.035	-0.053	-0.143	-0.014	***0.893***		
PPNE	-0.068	-0.001	-0.014	-0.098	-0.130	0.225	***0.789***	
CSCI	0.490	0.458	0.415	0.471	0.454	-0.125	-0.034	***0.825***

Note: Diagonal elements (in italics and bold) are the square root values of AVE.

4. Results

The conceptual model is assessed by examining the path coefficients (the β weight values in Table 3). Through software AMOS 21, findings indicate indices: χ^2 / df = 2.187 ($p < .001$); RMSEA = .058 (< .06); RMR = .073 (> .06); GFI = .874 (< .90); AGFI = .843 (< .90); CFI = .943 (> .90); NFI = .90 (> .90); TLI = .934 (> .90); IFI = .943 (> .90). Due to being sensitive to the sample size, GIF, AGIF, and RMR are under the acceptable indices. However, other indices are up to the acceptable indices, overall, the structural model fit is acceptable (Hair *et al*., 2006). As shown in Table 3, all path coefficients and t-statistics for hypothesized relationships are calculated through Maximum Likelihood in AMOS, and these findings indicate that the structural model has a good fit (Bagozzi & Yi, 1988).

As shown in Table 3., findings indicate H_1 and H_2 are supported because trust in SC has a significant positive impact on purchase intention and the weight value ($\beta = 0.521$, $p < .001$), as well as PR from SC has a significant negative impact on purchase intention and the weight value ($\beta = -0.155$, $p < .01$). Not only does PS positively influent trust in SC with the weight value ($\beta = 0.358$, $p < .0001$), but also negatively impacts PR from SC with the weight value ($\beta = -0.262$, $p < .01$). Therefore, H_{5a} and H_{5b} are supported. On one hand SMI has a negative impact on PR from SC and the weight value ($\beta = -0.167$, $p < .05$), on the other hand SMI has no impact on trust in SC. As a result, H_{3b} is supported, but H_{3a} is not supported. The same procedure is conducted to test the effect of PIC, SI, and PPNE on trust in SC and PR from SC. It is found that PIC has no impact on PR from SC (thus, H_{4b} is not supported), but PIC has a positive impact on trust in SC and the weight value ($\beta = 0.305$, $p < .001$) (thus, H4a is supported). Findings, moreover, reveal no effect of SI on trust in SC and PR from SC (thus, H_{6a} and H_{6b} are not supported). On the other hand, not only does PPNE have the negative on trust in SC, but also positively influences PR from SC. Therefore, findings support H_{7a} and H_{7b}.

Table 3. Path coefficients and *t* value

Path	Standardized coefficients	*t* value
SMI → Trust	0.074	1.354
SMI → PR	**-0.167***	-2.276
PIC → Trust	**0.305*****	4.575
PIC → PR	-0.047	-0.546
PS → Trust	**0.358*****	4.567
PS → PR	**-0.262****	-2.654
SI → Trust	0.092	1.490
SI → PR	-0.028	-0.347
PPNE → Trust	**-0.122****	-2.713
PPNE → PR	**0.188****	3.147
Trust → CESCI	**0.521*****	8.457
PR → CESCI	**-0.155****	-2.920
Model fit statistics (*N* = 349)		
$\chi^2(df)$	765.482(350)	
χ^2 / df	2.187	
GFI	0.874	
AGFI	0.843	
RMSEA	0.058	
RMR	0.073	
CFI	0.943	
NFI	0.900	
TLI	0.934	
IFI	0.943	

Note: *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$; SMI = social media interactivity; PIC = perceived information credibility; SI = social identification; PS = perceived security; PR = perceived risk; CESCI = consumer social commerce intention; PPNE = a buyer's perceived past negative experience.

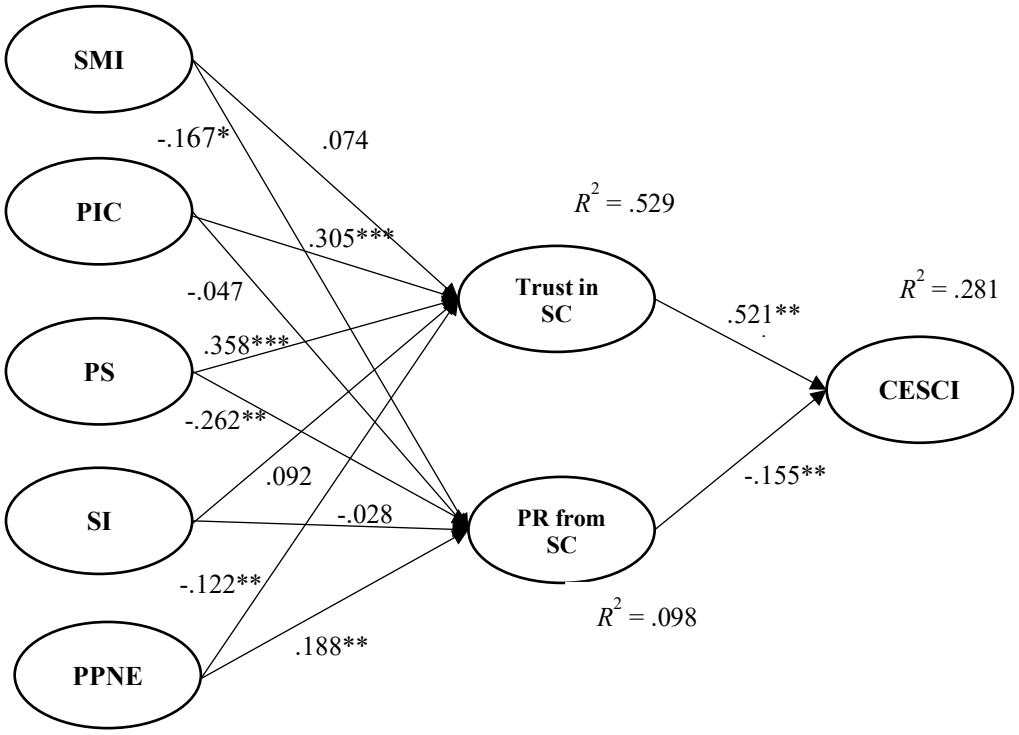

Figure 2. The Results of Conceptual Model Testing

5. Conclusions and Discussion

Based on the empirical findings in Figure 2., several conclusions can be drawn. First of all, supporting H_1 and H_2 leads to the fact that the higher trust in SC or the lower PR from SC, the stronger CESCI. The findings are in line with prior studies by Jarvenpaa *et al*. (2000), Pavlous & Gefen (2005), and Rehaman *et al*. (2019). Second, SMI is found to have the negative impact on PR from SC. That is, the more frequent social interaction, the lower PR from SC. This is because the feedback and opinions from the community members can diminish users' uncertainties and risk perception level about information evaluation purchase decision (Sozer, 2019). On the other hand, SMI has no impact on trust in SC because trust by social interaction in the community insufficiently implies a sense of trust in SC (Chiu *et al*., 2018). Third, it is found that PIC has the positive impact on trust in SC. The more accurate and the more credible information produced through social media, the higher trust in SC (Hajli *et al*., 2014). However, findings indicate PIC insignificantly influences PR from SC. This is probably because transactions between buyers and sellers in social commerce lead to an increase in risk perception of buyers (Yin *et al*., 2019).

Findings, fourth, indicate the effects of PS on trust in SC and PR from SC. That is, the higher PS in SC, the more comfortable consumers feel and the lower the level of consumer fear, and then further the stronger consumer purchase intention in social commerce (Afshan & Sharif, 2016). Fifth, the study indicates that SI has no impact on trust in SC and PR from SC. The findings are inconsistent with the studies by Pai and Tsai (2011), and Tidwell (2005). Chiu *et al*. (2018) point out this may be because SI can lead to build trust among community members as well as reduce the level of risk perception in communities, but an increase in confidence of users among community members and a reduction in PR in communities unnecessarily improve trust in SC and reduce PR from SC. H_{7a} and H_{7b} supported, finally, demonstrates that when community buyers have higher perception of negative experiences in social commerce, the level of their trust in SC is mitigated, but their risk perception is strengthened. For example, if buyers previously suffering negative experiences with community sellers have hostile opinion about the performance of these sellers, then these buyers are more likely to perceive PCV with other sellers on social media and more reluctant to engage in social commerce in the future (Pavlou & Gefen, 2005).

6. Contributions and Implications

6.1 Theoretical Contributions

In terms of theory building, this study develops a conceptual model to examine the roles of community buyers' affective reactions in social commerce. In consequence, findings of the empirical research have several theorical constitutes. Based on the PCV theory, first of all, this study is one of the first studies identifying a buyer's perceived past negative experience as an antecedent of community buyers' affective reactions in SC. When previously encountering problematic transactions with community sellers, buyers are more likely to perceive PCV with community sellers and followed by reduction in trust in these sellers, increase in PR from SC, and more reluctance to purchase their products or services in the future (Pavlou & Gefen, 2005).

In the social commerce context, second, parts of the four community stimuli (SMI, PIC, PS, and SI) about social media completely influence trust or PR in social commerce. Prior studies, for example, indicate SMI and SI significantly influence trust among community members (Carvalho & Fernandes, 2018; Liang *et al*., 2011; Park *et al*., 2014; Shanmugam *et al*., 2016). The study, however, points out trust promoted by SMI or SI in the community is unable to completely transfer to a sense of trust in social commerce. In social commerce, this is because SMI and SI insufficiently provide a mechanism (e.g. mutual understanding, reciprocal favor, and relationship harmony, etc.) between buyers and sellers (Chiu *et al*., 2018). For example, relationships among community users possessing one of the three mechanisms, including mutual understanding, reciprocal favor, and relationship harmony lead to buyers' trust in community sellers. Empirical findings of the study also demonstrate that PR reduced by PIC or SI about a social media platform unnecessarily implies a reduction in PR from SC. This may be because transactions between buyers and sellers in social commerce lead to higher risk perception of buyers (Yin *et al*., 2019). Finally, PS are identified as an important antecedent of trust and PR from social commerce. It is recommended that the more perfect security mechanisms in SC, the stronger trust in SC and the lower PR from SC.

6.2 Practical Implications

The findings of this study lead to several practical implications for social sellers. Empirical findings, first of all, indicate that trust and PR in SC are two drivers of CESCI. Therefore, it is strongly recommended that community sellers have to improve trust and decrease risk perception of buyers in SC. In order to avoid PCV occurrence, for example, community sellers have to comply with initial contracts between buyers and them. In case of emergence of transaction dispute, community sellers have to redeem the problematic transactions by providing service recovery and preferential strategies. Of five stimuli, second, PS significantly influences trust and PR from SC simultaneously. This implies buyers take their personal information and security mechanisms by social media seriously when engaging in SC. In order to prevent buyers' personal information, therefore, social media owners have to enact strict regulations and build perfect security mechanisms, and then further make sure buyers and sellers comply with these regulations. In order to minimize the risk perception and enhance trust of buyers, moreover, not only do community sellers have to comply with the regulations of the contracts between buyers and them, but also protect personal information of buyers from disclosure, modification, and abuse of data (Kalakota & Whinston, 1996).

Third, the negative impact of SMI on PR from SC implies that an increase in social interaction among community members can lessen the PR level of buyers in SC. As a result, it is recommended that social sellers should encourage users previously buying products or services to share their feedback and experiences with others. Moreover, social sellers timely provide community members' accurate opinions, rating valance, and rational text review towards products/service and sellers so as to lower risk perception of buyers. Findings indicate no impact of SMI on trust in SC, but an increase in social interaction among community members is able to build trust in the community, and then in the long term the sense of trust among community members can transfer to trust in SC. Due to PIC as a crucial antecedent of trust in SC, fourth, it is recommended that accurate and credible information provided by sellers can increase trust in SC. PR from SC is insignificantly influenced by PIC, but information asymmetry and questionable formation about products/services are able to lead to a reduction in buyers' risk level

(Hajli, 2018; Pavlou & Gefen, 2005). Therefore, social sellers still have to reduce information asymmetry as well as provide credible messages and other community members' feedback, experiences, and opinions towards products/services. Finally, a buyer's perceived past negative experience incurs PCV of individuals and further leads to the negative and positive effects on trust in SC and PR from SC, respectively. In consequence, community sellers have to understand about main problematic transacting sources arousing PCV and then make more promises and provide well recovery to consumers after failure in transactions. Moreover, it is recommended that customers make a greater request for promises of sellers on a social media platform in order to protect themselves from unpredictable outcomes of social commerce.

7. Limitations and Future Research

This study provides some insight into the roles of community buyers' affective reactions (trust and PR from SC) in CESCI, but it has several limitations for future research directions. First of all, the results are limited due to the evidence indicating that parts of five stimuli have impacts on trust and PR in SC. This may be because there are existences of mediators between these stimuli (e.g. SMI, PIC, and SI) and affective reactions (trust and PR from SC) (Chiu *et al*., 2018). Consequently, it is recommended that future research should explore mediating variables between stimuli and affective reactions (trust and PR from SC). Second, sample size is always an issue in an empirical study. Data collection from 349 usable social participants sufficiently establish model validation in this study, but findings might be unable to generalize to the entire SC population. As a result, it is recommended that future studies are needed to examine and validate the generalizability of the findings to more social user data. With the globalization, finally, multicultural integration and collision might be able to influence user behavior in social commerce. Therefore, other kind of user behavior in multicultural context is still a topic worth exploring.

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