The Role of Social User and Social Feature on Recommendation Acceptance in Instagram in Indonesia

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Abstract—**This study aims to identify the effect of social features and social users on recommendations acceptance on shopping activities in Instagram. This study uses quantitative approach to process 654 data collected using online questionnaire. The data were analyzed using CB-SEM method and AMOS 21 tools. The results of this study showed that social features and social users give moderating effect on the relationship between social recommendation, cognitive appraisal and affective appraisal. Meanwhile, affective and cognitive appraisal was found to affect purchase intention. The finding shows that the user giving recommendation and the features used to make recommendation can influence the level of recommendation acceptance.**

Keywords—**Social User, Social Feature, Social Recommendation, Purchase Intention, E-commerce**

I. INTRODUCTION

The increasing popularity of social interaction in social networking sites, such as Facebook, Twitter, and Instagram, drove a new form of e-commerce called social commerce [1]. Social commerce allows customers to directly process and develop products in the e-marketplace via social media platforms and social networking sites [2]. Social commerce provides User-Generated Content (UGC) features, such as comments, reviews, ratings, recommendations lists, tags, and user profiles, to allow customers to disseminate information during transactions [3].

One of the social commerce platform that is getting popular in Indonesia is Instagram. Instagram is a photo and video sharing app that lets users take photos, record videos, apply digital filters, and distribute them to various social networking services or within Instagram platform [4]. Since Instagram was launched in 2010, Instagram users has been increasing, without exception in Indonesia. In 2017, Instagram officially announced that there are more than 45 million active users of Instagram in Indonesia which significantly increased from 22 million active users in early 2016 [5]. From 45 million users, 80% are users that use their account for business purpose [5].

By the various features provided, users can share information related to products / services they have purchased and users who want to buy a product / service can request opinions from other users. However, not all information provided by other users regarding the product / service is credible and able to influence user to purchase the product / service. It shows that acceptance of recommendations is influenced by several factors.

There are several previous studies related to social commerce and purchasing behavior. Research conducted by Chen et al. [17] combines three SCC categories, namely forums & communities, ratings & reviews, and social recommendation. Chen's [17] study aims to investigate the differences between the three categories of SCC in influencing customer decision-making process for shopping. There is also research from Huang and Benyoucef [2] who aims to identify the user preferences of social features on social commerce sites. The study shows the importance of empirical investigation of users' perceptions of the social feature to improve acceptance of recommendations.

From literature study, it was found that there have been few researches on the effect of social features and social users on the acceptance of recommendations by Instagram users. Therefore, this study aims to find out how the influence of

social features and social users on the recommendation acceptance.

II. LITERATURE REVIEW

A. Social Commerce Instagram

Social commerce is about building relationships with customers and not just focusing on selling goods or services alone [7]. Today, what customers say is the key to online marketing activities [8]. Thus, business need to build their social commerce by creating an online shopping experience that involves more customers interaction, so that business can use online testimonials provided by their customers to drive more revenue [8].

Instagram is currently evolving into a social commerce platform where business activity is frequently carried out [7]. In Instagram social networking sites, there are many sellers who offer products in the form of goods or services. There are at least 25 million business accounts registered in Instagram [12]. Most sellers already have websites that are accessible to users from the seller's profile page. Using the website, the sellers can take advantage of the Shop Now feature that can be used by the buyer to directly open the seller's web page. Statistics show that 75% of Instagram users use the feature after seeing an ad uploaded by a business account [12]. With a variety of features available to support the interaction between users, Instagram is becoming a powerfull social commerce platform.

B. Social Recommendation

Social recommendation is the use of social media and social networking sites to get and make recommendations about what to buy [25]. There are several trends in social recommendation. The first trend is peer recommendation. Peer recommendation is recommendation made by peer users. The second trend is influencer marketing. Advertising on social media and social networking sites through influencers is currently becoming a trend [9]. Influencers are people who have a lot of followers or audiences on social media or on social networking sites and they have a strong influence on their followers, such as artists, programmers, bloggers, youtubers, and so on [9]. The third trend is user-generated content (UGC). User-generated content is content that is created by internet user and published publicly in a system [10]. User-generated content has great

marketing potential [10] and able to improve brand image with zero/minimal cost [11].

C. Social Feature and Social User

Social feature is a feature found on social commerce sites that allow users to interact and share information with other users or create content [2]. Social features become a medium for users to share social information, including recommendations about a product. From the various features in Instagram, there are some features that are classified as social features, such as Instagram Stories, Instagram Photo / Video Post, Instagram Direct, and Instagram Comment. In the context of Instagram as a social commerce, these features allow users to observe the behavior of other users and also to get feedback from other users related to a product or a seller of the product [18].

Social users are users who use social feature of social commerce sites to interact, share information, or create certain content. The term social user is adapted from the social identity term found in Tsai and Bagozzi research [26] which defined social identity as group member identification in the virtual community. In this study, social users are divided into four which are friends, family, acquintance, and celebrity.

D. Social Learning Theory

Social learning theory is a theory of learning and social behavior that explains how an individual learn new information and behavior by observing and imitating others [16]. There are two dimensions to this theory, namely the cognitive dimension that includes learning of knowledge or skills that builds an understanding and emotional dimension that includes mental, feeling, and motivation [17]. Furthermore, Chen et al. [17] described two dimensions on social learning theory through two variables, namely cognitive appraisal and affective appraisal. Cognitive appraisal refers to a person's evaluation based on utilitarian aspect, whereas affective appraisal is an evaluation based on the emotions, feelings, and reactions experienced by the individual in relation to the observed object [24].

In social commerce, some customers may want to gain more knowledge through existing features to aid their decision making [31]. Such experiences can make customers feel more satisfied, help meet their needs, and increase cognitive attachment [17]. In addition, customers can get social support through interaction with other customers [17]. Such experiences can

satisfy customers's needs of social interactions and thus generate affective attachments. These experiences can trigger customer's intention of buying in social commerce platform [17]. Therefore, this study uses cognitive and affective appraisal to describe the customer decision-making process on social commerce sites.

III. RESEARCH METHODOLOGY

This research uses quantitative approach with survey method for data collection. The survey contains questions with a choice of answers using a Likert scale from 1 to 5 (strongly disagree, disagree, neutral, agree, strongly agree). Before the survey was distributed, the survey was validated by conducting readibility test with 9 sample of respondents from various bacrground of disciplines. Survey then distributed online with target users of Instagram users in Indonesia who have made purchases in Instagram at least once. The data obtained is then processed using CB-SEM (Covariance Based Structural Equation Model).

The research questionnaire is divided into two parts. The first part of the questionnaire contains questions and statements related to the demographics of respondents, such as gender, age, occupation, length of use of Instagram, and frequency of purchases of products / services in Instagram. Meanwhile, the second part of the questionnaire contains statements that represent the factors studied in this study. The statement was adapted from previous related studies. The second part used the Likert scale for the answer.

IV. RESEARCH MODEL AND HYPOTHESES DEVELOPMENT

The selection of factors and the design of the research model was adapted from the research model of Chen et al. [17]. This research uses one component of SCC, namely recommendations & referrals. Recommendation & referrals is adapted as social recommendation in this study. This research also adds social feature factor from research conducted by Huang and Benyoucef [2] as well as social support factor from Yahia et al research [27] as moderating variables. In this study, the name of social support factor was modified as social users to adjust with this research context. Social users refer to Instagram users, such as friends, family, acquaintances, and celebrities. Fig. 1 shows the research model.
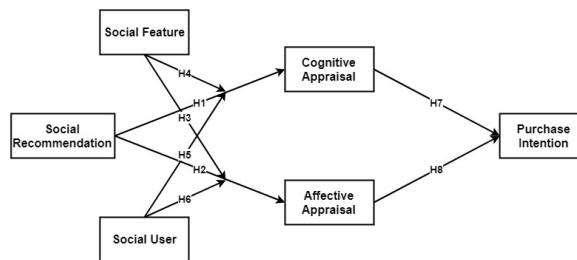

Fig. 1. Research Model

The model illustrates the recommendation acceptance proces in the frame of social learning theory. The formulation of hypotheses in this study will be explained as follows.

A. Relationship between Social Recommendation and Cognitive Appraisal

Lee et al. [24] represents cognitive appraisal as an individual's judgment to something, whether it is useful or not. In online shopping, customers have limited information from those provided by the seller. Social recommendation provides additional information for customers so that they can observe and interact further. Such observations or interactions enable customers to learn from other customers who have previously purchased and gained knowledge and information about the product or the respective seller [2]. With such learning, customers can also feel more satisfied because their needs for a knowledge or information can be met [13]. Therefore, a hypothesis that social recommendation positively affects the cognitive appraisal of Instagram users was proposed.

H1: Social Recommendation positively affects the Cognitive Appraisal of Instagram users.

B. Relationship between Social Recommendation and Affective Appraisal

Affective appraisal is an evaluation performed by a person based on the person's emotions, feelings, and reactions to something [24]. In social commerce, affective appraisal is related to experiences felt by a person, such as feelings of pleasure, contentment, or relaxation [17]. Social recommendation provides an environment for users to interact with others and exchange emotions, thereby increasing the affective appraisal of discussed matters. Based on this argument, a hypothesis that social recommendation positively affects the affective appraisal of Instagram users was proposed.

H2: Social Recommendation positively affects the Affective Appraisal of Instagram users.

C. Moderation Effects of Social Feature and Social User

In Instagram, each social feature can provide different functions, information and entertainment to the user. Therefore, the use of social features can affect users in affective and cognitive manners. Based on the argument, social feature was predicted to give moderation effect on the relationship between social recommendation, affective appraisal, and cognitive appraisal of Instagram user was proposed.

Meanwhile, online shopping experiences are also easily affected by personal stories of others, such as family members, friends, acquaintances, or celebrities [6]. Based on a survey conducted by Social Media Link in 2014 with 24,000 respondents, 77% of respondents felt that family members and close friends in social media were the ones who were most influencing to their buying decisions in social commerce. It shows that who gives recommendation influences the acceptance of recommendation. To see how type of users affect the acceptance of recommendation, this study observed how the social user affect the relationship between social recommendation and affective and cognitive appraisal. With that argument, the following four hypotheses were proposed.

H3: Social Feature gives moderation effect on the relationship between Social Recommendation and Affective Appraisal of Instagram Users.

H4: Social Feature gives moderation effect on the relationship between Social Recommendation and Cognitive Appraisal of Instagram Users.

H5: Social User gives moderation effect on the relationship between Social Recommendation and Affective Appraisal of Instagram Users.

H6: Social User gives moderation effect on the relationship between Social Recommendation and Cognitive Appraisal of Instagram Users.

D. Relationship between Cognitive and Affective Appraisal with Purchase Intention

A person's assessment of a social commerce site and information provided [14] can affect the person's intentions to shop. If a social commerce site is perceived as beneficial to the user, then the user will think that the social commerce site can provide a value for the user [17] which may increase the user's likelihood to make a purchase on the social commerce site [29]. It shows the relation of cognitive appraisal with purchase intention.

In addition to the usefulness aspect, if the use of social commerce sites can make user feel happy, relaxed, or satisfied, then user will think that social commerce sites can provide value to the users [17] which then can increase the likelihood of a purchase on the social commerce site [29]. Based on those arguments, hypothesis that cognitive and affective appraisal positively influence the purchase intention of Instagram users is proposed.

H7: Cognitive Appraisal positively affects Purchase Intention of Instagram users.

H8: Affective Appraisal positively affects Purchase Intention of Instagram users.

V. RESULT AND DISCUSSION

A. Demographic of Respondents

The respondents of this study were Instagram users in Indonesia who have purchasing experience in Instagram at least once. Respondents' data were collected from March 7, 2018 to May 14, 2018 and resulted in 684 data. After going through the validation process, there are 658 valid data that can be used. The demographics of this study are presented in the following table.

TABLE I. DEMOGRAPHIC

Demographic Variable		Percent age (%)	Demographic Variable		Percent age (%)
Gender	Male	27.36	Have been using Instagram for	< 6 months	0.76
	Female	72.64		6 – 12 months	3.04
Age (years)	<=20	17.93		1 – 2 years	10.64
	21-30	80.70		3 – 4 years	43.46
	31-40	1.22		5 – 7 years	39.06
	>40	0.15		> 7 years	3.04
Occupation	Student	61.55	Num of purchase made through Instagram	1 - 5	62.15
	Government Employee	2.89		6 – 10	21.73
	Private Sector Employee	26.30		11 – 15	6.23
	Entrepreneur	3.34		16 – 20	2.43
	Others	5.92		> 20	7.45

The information presented in Table I shows that the majority of respondents who completed this research questionnaire is female (72.64%). These results support the results of research

conducted by BMI Research in 2015 which found that the majority of online shopping activities are dominated by women with a percentage of 53% [15]. In addition to gender, the majority of respondents are aged between 21-30, students, and have been using Instagram for more than 3 years. All respondents have experience in making a purchase through Instagram.

B. Measurement Model

There are three tests conducted on the measurement model, which are convergence validity test, reliability test, and discriminant validity test. Convergent validity test was performed to measure the relationship between the indicator and its construct [32]. According to Hair et al. [22], to achieve convergent validity, the value of the average variance extracted (AVE) of a variable must be greater than 0.5. Each variable in this study has an AVE value in the range of 0.789-0.989. Apart from the value of AVE, convergent validity can also be achieved if the factor loading values of each indicator is greater than 0.7 [21]. If there is an indicator with a factor loading value <0.7, then the indicator can be erased or set an error variance with a value of 0.01 [30]. Each indicator in this study has a value in the range of factor loading 0.733-0.994. Based on these two results, it can be said that each indicator can represent its latent variable and the model has fulfilled convergence validity test.

The reliability test is performed by evaluating the value of composite reliability (CR) and cronbach's alpha (CA). According to Hair et al. [22], CR and CA values must be greater than 0.7. The calculation results show CR value in the range 0.924-0.996 and the value of CA in the range 0.742-0.880. Thus, it can be said that the construct has a high reliability and the model has met the reliability test.

The discriminant validity test is performed by looking at the AVE root square value which should be greater than the correlation coefficient of each variable [20]. In addition, discriminant validity can also be met by looking at cross-loading of each factor. According to Hair et al. [21], the factor loading of each indicator must be greater than the factor loading of each indicator of another variable. The result shows that each AVE square root value is greater than variable correlation coefficient and each factor loading of an indicator is greater than factor loading of other variable indicator; thus, the model has met discriminant validity test.

After validity and reliability were met, a goodness of fit (GOF) test was required to see the fitness of the model with the existing data [23]. The criteria used are CMIN (P), RMSEA, GFI, AGFI, CFI, TLI, NFI, and CMIN / df [28]. In the first test, the resulting value does not meet the cut-off of each criterion. To make the model fit, the model needs to be changed by adding covariance between variables with other variables, error with other errors, or variables with errors until the model becomes fit based on the largest modification indices (MI) [22]. The results show that almost all criteria have good fit values, except CMIN (P). However, although the CMIN (P) criterion was not fit, the overall model was fit because the study with a sample size more than 250 and observed variables less or equal than 12 will not produce significant CMIN (P) values [22].

C. Structural Model

Structural model testing is done to examine the hypothesis. The hypothesis submission is done by comparing the p value with the 5% significance level which can be seen from bootstrap confidence in AMOS 21. According to Efron and Tibshirani [19], the hypothesis is accepted if the significance level $p < 0.05$. Among the four hypotheses without the proposed moderation effects (H1, H2, H7, H8), the results show that the p values obtained are in the range 0.0003-0.0011, so it can be said that the four hypotheses were accepted. Figure x shows the final research model.

D. Multi-Group Analysis

Multi-group analysis was conducted to determine the moderation effects of social features and social users (H3, H4, H5, H6). To measure the effect of moderation, SEM was applied to each group by looking at the difference in Chi-square values and the path coefficient [28]. Table II shows the results of multi-group analysis. From the table, we get the result that all hypothesis for moderating effect (H3, H4, H5, H6) were accepted. For relationship between social recommendation and affective appraisal, Instagram Comment (0.83) and friend (0.65) have the highest path coefficient. For relationship between social recommendation and cognitive appraisal, Instagram Photo / Video Post (0.64), Instagram Comment (0.64) and also family (0.68) have the highest path coefficient.

TABLE II.   MULTI-GROUP RESULTS

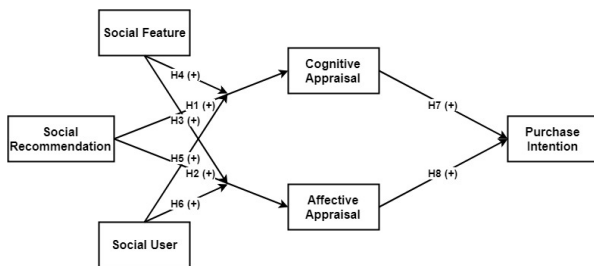| Path	Social Feature		Social User	
	SR-CA	SR-AA	SU-CA	SU-AA
Path coefficient	- Instagram Stories (0.63) - Instagram Photo/Video Post (0.64) - Instagram Direct (0.58) - Instagram Comment (0.64)	- Instagram Stories (0.64) - Instagram Photo/Video Post (0.67) - Instagram Direct (0.54) - Instagram Comment (0.83)	- Teman (0.63) - Keluarga (0.68) - Kenalan (0.66)	- Teman (0.65) - Keluarga (0.64) - Kenalan (0.58)
Chi-square difference	448.363	429.049	440.774	414.300
Cut-off	15.36 (3.84 x 4 difference)		11.52 (3.84 x 3 difference)	
Results	Accepted	Accepted	Accepted	Accepted

Fig. 2.   Final Research Model

E.   Discussion

This study found that social recommendation affects positively Affective Appraisal of Instagram users. Comparing with the research conducted by Chen et al. [17], they found that social recommendation does not have a significant effect on one's cognitive and affective judgments if there are two other SCC components, forums & communities and ratings & reviews. According to Chen et al. [17], the other two components of SCC cause the social recommendation's influence on cognitive appraisal and affective appraisal become weaker. Chen et al. [17] found that if both components are not evaluated then social recommendation will have a significant effect on cognitive appraisal and affective appraisal, as is done in this study. This finding aligns with Chen et al.'s study [17].

This study also found that the features and types of users give moderating effects in the relationship between social recommendation and cognitive & affective appraisal. This means that the type of features used to provide recommendations and the type of users who provide recommendations affects the level of acceptance of recommendations. It is not surprising that different features generate different influence since each feature has its own characteristics and yields difference entertainment and usefulness level. For example, in Instagram Post, people can view video which is rich in information and more entertaining than text information. Meanwhile, in Instagram Direct Message, there is a limitation in conveying the information thus it has different perceived usefulness and enjoyment than Instagram Post. Those differences influence on how user perceive the recommendation delivered.

As for type of user, it is also intuitive that different user has different effect. For example, it is easier to accept recommendation from someone we know (e.g. family, friends) or someone we respected (celebrity) rather than someone we don't know. This discovery confirms the intuition we have on user's buying behavior and contribute to the theory of user behavior on social commerce sites.

VI.   CONCLUSIONS

This study was conducted with aims to determine the influence of social features and social users on the acceptance of recommendations on online-shopping activities in Instagram. From the analysis, it was found that social feature and social user can influence the acceptance of recommendation. In addition, cognitive and affective appraisal was found positively affecting the purchase intention of Instagram users, where the affective appraisal factor has a greater influence. These findings implied that aside from its function, it is also quite important for social commerce to develop platform that is fun to use to improve affective appraisal which will then influence purchase intention. It is crucial to create social commerce platform with useful and entertaining features which enable users to communicate easily with each other.

VII. LIMITATION AND FUTURE STUDIES

The scope of this study was to analyse whether types of social features and social users affect the level of acceptance of recommendations. Further research can add more features and type of users to observe in more detail the most effective feature and user in improving acceptance of recommendations. In addition, the majority of respondents from this

study were women, students, and aged between 21-30 years. Further research can balance the demographics of respondents so that it can improve the generalization of the results.

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