

# The Relationship between Upward Social Comparison on Social Networking Sites and Impulse Buying: The Mediating Role of Benign Envy

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## Abstract:

The aim of this study is to propose and empirically test a model pertaining to the relationship between upward social comparison on SNSs, benign envy and impulse buying. Moreover, this research also simultaneously examines how benign envy mediate relationship between upward social comparison on SNSs and impulse buying. Fully comprehending these relationships is beneficial to stimulating SNSs users to make impulse purchases through “unescapable traps” set by upward social comparison and benign envy stimuli. Data collected from 302 valid questionnaires were used to empirically test the research model. By using structural equation modeling (SEM) to examine research model, the results highlighted that upward social comparison on SNSs positively and directly affects impulse buying and benign envy, respectively. Most importantly, with the support of benign envy as a mediator, we claim that there exists an indirect relationship between upward social comparison on SNSs and the practice of impulse buying, which makes a considerable contribution to a better insight into consumer buying behavior. Limitations and further research are also discussed at the end of the research.

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## Introduction:

In recent decades, humankind has been experiencing a steep growth in social networking sites (SNSs), such as Facebook, which has become an indispensable part of millions of people's daily routine. In fact, people are using SNSs to fulfil their need of belonging and self- presentation (Nadkarni, 2012) [1]. Additionally, SNSs usage, the process of absorbing other SNSs friends' information, somewhat provokes a sense of social comparison (Vogel, 2014) [2], and in turn induces benign envy (Appel, 2016) [3]. Besides, the issue of this research is impulse buying that is paid huge attention from researchers for its lucrative advantages (Abratt and Goodey, 1990) [4].

Furthermore, since upward social comparison and impulse buying were actually tested numerous times with their antecedents and consequences, but separatedly, for example, the pernicious influences of upward social comparison lead to depression (Wang, 2017) [5] or the association of website attributes and online impulse purchase (Bai *et al.*, 2013) [6], very few existing research has examined their causal relationships. It is that literature gap is the first reason captivating us to choose and adopting the mediating role of benign envy to study this topic. The second reason is Marketing benefits. Most strikingly, while mass customization became a trend (Kotler, 1989) [7], SNSs is an ideal ground for understanding customer' behavior and customizing Marketing strategies towards every customer based on the wealth of customers' data collected. Thus, if

well- utilized, marketers would be able to increase greater number of touchpoints through making upward social comparisons on the online platforms, and ultimately letting potential customers easily succumb to the temptation of impulse purchase.

In order to accomplish these aforementioned goals, the following research are proposed:

1. To examine the direct relationship between upward social comparison on SNSs and impulse buying.

2. To examine the indirect relationship between social comparison on SNSs and impulse buying via the mediating role of benign envy.

## LITERATURE REVIEW

### Upward social comparison on SNSs

Collins (1996) [8] conceptualized upward social comparison as a comparing state towards those who are perceived superior, which was based on the social comparison theory of Festinger (1954) [9]. Apart from well- being, previous research also studied this common phenomenon in other fields, especially at workplace (Brown, 2007) [10].

Longitudinal studies have demonstrated that upward social comparison is more popular on SNSs (Schmuck, 2019) [11] owing to the greater of positive of user's information (Reinecke and Trepte, 2014) [12]. And this upward comparing pattern has been receiving the great deal of researchers' attention as it contributes to explain human behavior after using SNSs. Most notably, Lewallen (2016) [13] pointed out the influences of upward social comparison on women' s intense weight- loss behavior after following fitness boards on Pinterest. Anyway, Facebook and Instagram are also two largest SNSs platforms for studying upward social comparison.

### Impulse buying

Rook (1987) [14] defined impulse buying as an unreflective practice, in which buyers purchase something in the absence of careful consideration and evaluation. The analysis of Amos (2014) [15] listed 17 antecedents of impulse buying that are

grouped into 3 brackets: dispositional factors, situational factors and sociodemographic. The summary benefits retailers in regulating these factors and consequently attract consumers who are predisposed to impulse buying. Impulse buying is paid much researchers' attention and studied in various industries, for example, FMGC products (Tauseef, 2011) [16] and fashion (Pentecost, 2010) [17]. The reason is its managerial interest as impulse buying could boost sales and sold product volume (Muruganantham, 2013) [18].

Furthermore, some scholars also point out that online shoppers are more spontaneous in comparison with traditional store shoppers (Park *et al.*, 2012) [19], which is advantageous for our study as SNSs is put on primary focus.

Based on all above proof, we propose a following hypothesis:

*H1: Upward social comparison on SNSs is a predicting sign of impulse buying*

### The mediating role of benign envy

Envy is defined as a painful experience that arises when an individual craves other's good possessions (Belk, 2008) [20]. Additionally, it is believed that benign envy, one of two subtypes of envy, is a spur for individuals' endeavor to be as successful as the envied.

Scholars have elucidated that social information exposure is one of the derivations of envy (Parrott and Smith, 1993) [21]. In fact, when users browse their News Feed, click on stories', follow other friends' online activities and actively peruse their profiles, they are more likely to feel envy (Burke *et al.*, 2010) [22], which contains benign envy. The root of this ubiquitous phenomenon can be explained by upward social comparison as most exposed information on SNSs is positively optimized (Lee-Won, 2014) [23].

There also have been several evidences for the incentive impact of envy on purchase decision (Belk, 2008) [24]. Moreover, Lin (2018) [25] reckoned that benign envy also tempts customer to complete the act of buying, and specifically it drives people to buy

the same envied purchase. More importantly, it is proved that impulsivity is also elicited by envious experience (Crusius, 2012) [26]. Thus, the following hypotheses are proposed:

*H2: Upward social comparison on SNSs positively affects benign envy.*

*H3: Benign envy positively affects impulse buying.*

## METHODOLOGY

### Data collection

In order to test 3 hypotheses, we collected data from students in the two biggest universities in south area of Vietnam via convenience sampling method. Participants were required to fill in hard-copy questionnaires provided directly by authors from October, 2019 to the end of January, 2020. The data obtained by this way could be more reliable than by online survey. The sample of university students was used since they tend to be more frequently involved in social comparisons behavior in comparison with adults (Stipek and Tannatt, 1984) [27]. Among the 336 questionnaires returned, 34 were incomplete or unusable. Thus, the final sample used for the analysis consisted of 302 respondents. Among them, 128 (42.3%) were male, 174 (57.7%) were female and their ages range from 18 to 24. Besides, 59 respondents (19.5%) were freshman, 126 (41.7%) were second-year students, 72 (23.8%) were third-year students and 45 (15%) were senior.

### Measurement

The research model included three latent variables (upward social comparison on SNSs, benign envy and impulse buying), each of which was measured with multiple items. The measurement scales were adopted from literature. Six items measuring upward social comparison on SNSs were adopted from Chinese version scale of Bai *et al.* (2013) [6]. Benign envy- measuring items were extracted from Crusius and Lange (2015) [28]. For impulse buying, we used an eight-item scale from study of Badgaiyan *et al.* (2016) [29]. All items were rated on seven-point Likert scale ranging from (1) strongly disagree to (7) strongly agree.

In order to fit the study environmental context of Vietnam all items were also translated from English to Vietnamese. The translated questionnaire was also review by two bilingual experts to ensure the accuracy and semantic. Before implementing official survey, 30 students were invited to answer questionnaire in pilot test for the purpose of determining the feasibility of this study. The result of pilot study indicated that the questionnaire is well reliable, in which the Cronbach's alpha index of all variables ranges from 0.913 to 0.94.

## RESULTS

In this study, structural equation modeling (SEM) was employed as the main data analysis method. SEM was approached in two steps including measurement model and the structural model.

### Measurement model

We firstly conducted confirmatory factor analysis (CFA) on the data with the help of Amos 23.0 to assess the overall fit of measurement model. The acceptable fit model was evaluated based on six indices recommended by Bagozzi and Yi (1988) [30], including (1) chi-square/degree of freedom ( $\chi^2/df < 3.0$ ); (2) comparative fit index (CFI  $> 0.90$ ); (3) normed fit index (NFI  $> 0.90$ ), (4) goodness of fit index (GFI  $> 0.90$ ), adjusted goodness of fit index (AGFI  $> 0.80$ ) and (6) root mean square error of approximation (RMSEA  $< 0.08$ ). The analysis results show that  $\chi^2/df$  (1.210), RMSEA (0.026) both met the threshold criteria and CFI (0.993), NFI (0.960), GFI (0.941), AGFI (0.925) all exceeds the recommended cutoff values. In sum, the fit of measurement model was found to be acceptable.

In order to validate the overall measurement model, we examined the construct reliability, convergent validity and discriminant validity of the constructs.

The reliability of variables was evaluated based on Cronbach's alpha ( $\alpha$ ) and composite reliability measures (CR) values. As showed in Table 1, the Cronbach's  $\alpha$  and CR values of three constructs were

higher than 0.7 threshold which achieved acceptable internal consistency (Fornell and Larcker, 1981) [31]. Two standards were employed to examine the convergent validity of the model, including factor loadings index and average variance extracted (AVE). The analysis results show that the all factor loading exceeded 0.5 threshold (Hair et al., 2010) [32] and the AVE values were higher than 0.5 threshold (Fornell and Larcker, 1981) [31], indicating that the instrument achieves acceptable convergent validity.

The discriminant validity was assessed by comparing the values of AVE and correlation. According to Fornell and Larcker (1981) [31], if the AVE value for each variable are higher than the squared of correlation between that and any other variables, discriminant validity is achieved. Table II indicates that the lowest AVE (0.649 for USC) exceeds the highest square root inter-construct correlation (0.608 between USC and IB). As a result, discriminant validity of measurement model was acceptable.

**Table I.** Standardized item loadings, t-value, Cronbach's  $\alpha$ , CR and AVE values

Construct	Item	Factor loadin g	t-value	$\alpha$	CR	AVE
Upward social comparison on SNSs	USC 1	0.881		0.916	0.917	0.649
	USC 2	0.802	17.24			
	USC 3	0.733	15.35			
	USC 4	0.757	15.16			
	USC 5	0.794	18.58			
	USC 6	0.856	19.26			
Benign envy	EV1	0.838		0.909	0.910	0.661
	EV2	0.806	17.32			
	EV3	0.776	16.34			
	EV4	0.811	15.65			
	EV5	0.856	18.4			

			6			
Impulse buying	IB1	0.854		0.940	0.940	0.661
	IB2	0.822	16.52			
	IB3	0.816	16.28			
	IB4	0.784	17.88			
	IB5	0.774	15.45			
	IB6	0.768	12.68			
	IB7	0.840	16.79			
	IB8	0.842	18.22			

(Note:  $\alpha$ : Cronbach's alpha; CR: composite reliability; AVE: average variance extracted, p-value < 0.001)

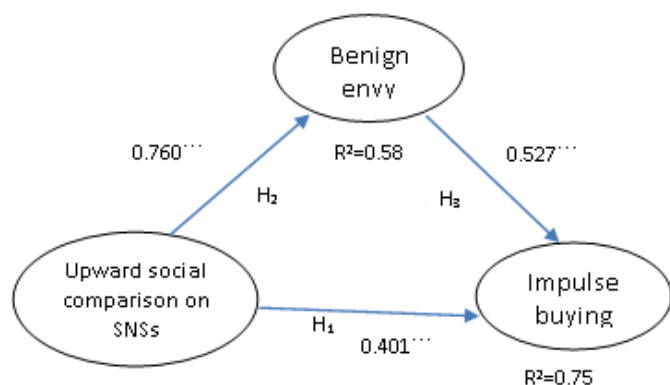
### Structural model

The result of fitting indices of the structural path model shows that  $\chi^2/df$  (2.414), RMSEA (0.069), NFI (0.920), CFI (0.951), GFI (0.900) and AGFI (0.873) all exceeded the cutoff values (Bagozzi and Yi, 1988) [30], indicating that the research model achieved the overall fit. Furthermore, we also we used the explained endogenous variables' variance ( $R^2$ ) criteria to demonstrate the predictive validity of the research model (Henseler *et al.*, 2012) [33]. The figure I illustrates the explanatory power of the model are rather high, with  $R^2$  value for impulse buying = 0.75 and for benign envy = 0.58.

The estimation of causal path parameters from SEM provides examination of three hypotheses with all paths in the research model are supported.

Upward social comparison has significant effects on impulse buying (path coefficient = 0.401,  $p < 0.001$ ) and benign envy (path coefficient = 0.750,  $p < 0.001$ ). Thus, hypotheses  $H_1$  and  $H_2$  are confirmed. Additionally, benign envy also positively affects impulse buying ( $\beta = 0.527$ ,  $p < 0.001$ ), supporting hypotheses  $H_3$ .





**Figure I.** The estimated path coefficients of structural model

### Mediating effects of benign envy

The model 4 of the PROCESS macro (Hayes, 2013) [34] was adopted to test the mediating effects of benign envy. The analyses were conducted via bootstrapping (5000 bootstrap samples) with 95% confidence intervals. The results indicate indirect positive effects of upward social comparison on SNSs on impulse buying (benign envy mediation:  $\beta = 0.223$ , 95%, CI = 0.133–0.328). Accordingly, benign envy mediated the relationship between upward social comparison on SNSs and impulse buying.

**Table II.** Correlation matrix and AVE

Variable	USC	EV	IB
USC	<b>0.649</b>		
EV	0.526	<b>0.669</b>	
IB	0.608	0.523	<b>0.661</b>

(Note: Average variance extracted (AVE) is represented by the diagonal elements in bold. The correlation coefficients are represented by the off-diagonal elements. All correlation coefficients are significant at the  $p < .001$  level. USC = Upward social comparison on SNSs, BEV = Benign envy, IB = Impulse buying).

### GENERAL DISCUSSION.

This study examines whether the underlying mechanism between upward social comparison on SNSs and impulse buying exists, and concurrently

tests the mediating role of benign in this relationship. The results show that upward social comparisons on SNSs occurring on SNSs simultaneously trigger benignly envious sense, which is in line with the previous study of Crusius and Lange (2015) [28].

Additionally, it is well established that benign envy is a driving force of impulse buying, and this discovery is consistent with Crusius (2012) [26]. This result is consistent with prior research indicating the effect of upward social comparison on SNSs on benign envy (Zheng *et al.*, 2018) [35], and reinforces the evidence for impacts of benign envy on impulse purchase that we assumed by the study Oflazoğlu (2016) [36].

Most importantly, we also partly draw the existence of the indirect effect of upward social comparison on SNSs on impulse purchase via the mediator, benign envy. It is also coincides with the result of the research of Liu (2019) [37] (benign envy can be sometimes seen as a mediating factor in Liu's research) and the studies of Podosen (2012) [38] (when impulse buying is increased by materialism that is impacted by upward social comparison and envy).

The bottom line is that the direct impact of upward social comparison on SNSs on impulse buying is supported, which means those who have comparing proclivity with the perceived superior on SNSs are susceptible to impulse buying.

### LIMITATION AND FURTHER RESEARCH

First, this study examined the effect of upward social comparison on SNS to impulse buying, in which benign envy plays the role as a mediator. We did not include any moderators for some special reasons. However, in fact, users always experience a mixed variety of external and internal factors, in which inherent person's personality attributes play a key role. For example, the level of self-control is capable of regulating the likelihood impulse activities and envy (Crucius, 2012) [26]. Therefore, follow-up study will take these human attributes-associated factors as moderators into consideration.

Another limitation that we should scrutinize and solve in future research is to profound test how long the impact of upward social comparison on impulse buying lasts, whether it is a momentary or long-lasting influence. By conducting longitudinal studies in the future, we believe that this matter will be answered, which helps marketers form viable media strategies and have timing interventions to stimulate upward social comparison on SNSs, feeling envious and ultimately making impulse purchase.

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