

# Why do people visit social commerce sites but do not buy? The role of the scarcity heuristic as a momentary characteristic

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## **Abstract**

Due to the low conversion rate of social commerce, its sustainability is questioned. To solve this problem, this study aims to verify the different antecedents between visit intention and purchase intention. For a visit intention, this study employs the concept of the scarcity heuristic and its momentary characteristic. The scarcity heuristic is created by a scarcity of time and quantity, and provisional coupons. In previous studies, the scarcity heuristic has often been treated as a major factor in which to influence purchase intention. However, this study examines the scarcity heuristic only as an antecedent of the visit intention, not of the purchase intention, because of its momentary characteristic. Contrary to previous studies, as this study expected, the attributes of the scarcity heuristic had a significant relationship only with the visit intention in social commerce. Additionally, the results suggest that there are two distinct intentions in social commerce: visit intention and purchase intention. This study verified that the antecedents of the two distinct intentions are different from one another. This study helps to understand why people visit social commerce sites regularly but do not buy.

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**Keywords:** Scarcity heuristic, social commerce, momentary characteristic, persistent attribute, scarcity of time, scarcity of quantity, provisional coupon

## 1. Introduction

Social commerce (SC) is a novel form of e-commerce that uses social media networks to support social interaction and user contributions to assist in the online buying and selling of products and services. The market growth of global social commerce is estimated to be 400% between 2011 and 2015. The total sales will reach \$30 billion by 2015 [1].

Meanwhile, sustainability of social commerce are questioned since conversion rates, which indicate the actual buying rate by the number of potential visitors in social commerce, are relatively low. According to Monetate report, the conversion rate by social commerce was just 1.09% [3]. This indicates that the actual buying over the visiting rate of social commerce is relatively small despite the high traffic of visits. Recently, in the social commerce field, many studies only focused on the conceptual perspective within the definition and structure of social commerce. Although many factors of social commerce have been suggested in previous literature, few studies simultaneously focus on the visit and purchase intention of consumers [19].

Current studies on social commerce have considered various different factors; such as closeness, familiarity, trust, customer rating and review, social ads, referrals, recommendations, etc., as unique characteristics of social commerce [14, 24, 26]. However, scarcities factors, such as time and quantity limit, and provisional coupons—the consumers' perception of temporal redeemable coupon offers in SC sites—are overlooked, despite their importance in social commerce. To address this, this study applies the scarcity heuristic in order to analyze the social commerce market. The scarcity heuristic represents the perception of individuals who place more value on items that are (or that are believed to be) more difficult to acquire [6]. Therefore, this study considers the scarcity heuristic of social commerce as a momentary characteristic. The scarcity heuristic is examined alongside persistent characteristics (such as those listed above) in order to clarify the antecedents of visit and purchase intention in social commerce.

The purpose of this study is to investigate the low conversion rate in social commerce. This study also aims to understand the differences between antecedents of purchase intention from antecedents of visit intention. To achieve this, two research questions motivated and guided this study. First, why do people regularly visit social commerce sites even if they do not buy? Second, why does social commerce have a low conversion rate despite high visiting rates?

## 2. Literature Review

Based on social network services, social commerce has created a specific platform for its customers [19]. Since 2005, social commerce has enabled customers to shop easily with their laptop and mobile devices [27]. Discounted prices, user-specific advertising, and social-based interfaces are unique characteristics of social commerce as compared to those of traditional e-commerce. Despite these distinguishing features, there has not yet been sufficient research on certain aspects of social commerce and its growing importance.

Previous studies have focused on features of social commerce referred to in **Table 1**. According to a previous study, the positive relationship between social values such as closeness, familiarity, and purchase intention are empirically tested [24]. Five features of social commerce (recommendation and referrals, forum and community, rating and review, social media stores, and social ads & applications) were suggested from previous studies [17,

24]. Trust and other related factors for developing social commerce sites were also considered as important elements. The various antecedents of social commerce are only related to the increasing commitment of consumers and purchasing items in social commerce. Social commerce sites usually provide consumers with provisional offers. For example, Groupon suggests provisional offers such as coupon redemption, limited purchasable time and quantity of items, and discounted prices during a limited period [26]. However, few studies focus on these scarcity features. Thus, we consider both the scarcity and persistent characteristics as major features of social commerce sites. This study empirically focuses on scarcity attributes of social commerce as well as common persistent characteristics, such as trust, discount rate, and usefulness.

**Table 1.** Previous studies of features of social commerce

Literatures	Variables	Findings	Limitations
Ng (2013) [24]	Closeness, Familiarity, Trust in social Network, Community, Purchase Intention, Perceived Usefulness, Intention to buy, Recommendation and Referrals, Forum and Community, Rating and review	* Identifying Cultural effects * Suggested social values for Social commerce (Closeness and Familiarity) * Rating and review, Recommendation and Referrals was not significant. * Other factors were supported	* Closeness & Familiarity increased Purchase Intention in Social Commerce * Temporal features of social commerce were not focused * Adoption Modeling was considered * Forum and Community feature was important in social commerce * temporal features were not considered
Huang and Benyoucef (2013) [15]	Community Design, Commerce Design and Conversation Design were suggested	Suggested social commerce's Design principle Compared to e-commerce design	* Conceptual research was conducted * Each element should be tested with data analysis * Although perceptual measurement for each item was conducted, almost factors were based on e-Commerce. * Temporal and Social values of social commerce were not focused.
Kim and Park (2013) [16]	Reputation, Size, Information Quality, Transaction Safety, Communication, Economic Feasibility, Word-of-Mouth, Referrals, Purchase Intentions, WOM intention	Considered various characteristics of social commerce	* Economic Feasibility was not sig. * Trust mediated factors * Functional features was not considered * Temporal features of social commerce was not focused.

Shadkam and O'Hara (2013) [26]	Social Media Stores, Rating and Review, Recommendations and Referrals, Forums and Communities, Social Ads and Applications	suggested social commerce factors	<ul style="list-style-type: none"> <li>* Conceptual research</li> <li>* Goal of Social commerce</li> <li>Program as follow:</li> <li>Execution a social shopping strategy</li> <li>Integration and Synchronization</li> <li>Utilizing customer ratings and reviews</li> <li>Utilizing social recommendation</li> <li>Providing consumer communities</li> <li>Providing social Ads</li> <li>Updating tools and strategies</li> <li>* Although 5 characteristics of social commerce were suggested, temporal values of social commerce were sufficiently not considered.</li> </ul>
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As shown in **Table 2**, previous research on social commerce has considered purchase intention of consumers as an important determinant. For instance, social values and website quality were found to be positively related with intention to purchase in social commerce sites [14, 17, 18]. According to Curty and Zhang (2013) [7] and Han and Windsor (2011) [13], features for social commerce sites can increase willingness to pay. In short, previous studies mainly have focused on purchase intention in social commerce. However, there are two main intentions to consider: purchase intention *and* visit intention. Antecedents of purchase intention may be different from those of visit intention; this study considers both.

**Table 2.** Previous literatures about purchase intention in social commerce studies

Literatures	IV	DV	Findings
Liang et al. (2011) [19]	Social support (Emotional & Informational), Relationship Quality(Trust, Satisfaction, Commitment), Web site Quality (Systems Quality, Service Quality)	Social Commerce Intention, Continuance Intention	* finding out the commercial intention and continuance use intention
Ng (2013) [24]	Closeness, Familiarity Trust with cultural factors	Intention to purchase in social commerce	* culture of individuals differently increase user intention to purchase
Hajli (2012) [14]	Forum & Communities, Trust, Perceived usefulness	Intention to buy	<ul style="list-style-type: none"> <li>* The role of trust and perceived usefulness in influencing consumer behavior</li> <li>* Adoption behavior of social commerce</li> </ul>
Han and Windsor (2011) [13]	Trust, perceived value, playfulness	Willingness to pay	* understanding the impact of trust for willingness to pay social commerce

Kim and Park (2013) [17]	Reputation, size, information quality, transaction safety, communication, economic feasibility, WOM referrals	Purchase Intention, WOM intention	* suggested trust performances such as purchase intention and WOM intention
Curty and Zhang (2013) [7]	Promote and Attract Others, Create Self-Identity and Sense of Community, Generate Content, Act Collectively	Acceptance and Purchase behavior	* using examples, this study suggested how website features impact on social commerce based on users' purchase perspective
Gatautis and Medziausiene (2014) [11]	Performance expectancy, effort expectancy, social influence, Facilitating condition	Behavioral Intention (Acceptance)	*Lithuanian-based research
Pagani and Mirabello (2011) [25]	Personal engagement factors, social interactive engagement factors	Active Usage, Passive Usage	* finding out antecedents of usage in social commerce sites
Boon et al. (2012) [2]	Number of deals, Average price, Average discount, Average number sold, Average revenue per deal	Characterizing deal	* understanding of the characteristics of social commerce features to purchase

### 3. Research Model and Hypothesis Development

#### 3.1 Momentary characteristic: The different role of the scarcity heuristic in social commerce sites

As mentioned above, this study analyzes the concept of the scarcity heuristic in order to help explain why people regularly visit social commerce sites but do not end up purchasing items [6]. Many social commerce sites put significant effort into making consumers visit their service. One of the most famous strategies is to create an artificial scarcity. An artificial scarcity is a purported, or false, scarcity of items where there are no real scarcities [8]. The scarcity heuristic occurs with any artificial scarcity tactic. For example, Disney uses the scarcity heuristic strategy with their "Disney Vault." The "Disney Vault" is the term used by Walt Disney Studios Home Entertainment for its policy of controlling the release of their products [4]. Disney products are available for purchase within a limited timeframe. After the allotted timeframe, the products go in the "Vault." This limitation of availability creates an artificial scarcity [23]. With enough consumers playing into the scarcity heuristic, the products remain valuable once Disney re-releases them.

Similar to the "Disney Vault," social commerce sites create an artificial scarcity by limiting the purchasable time and quantity, and by providing provisional coupons. This causes consumers to visit social commerce sites regularly in the hopes of finding a deal. However, although the scarcity heuristic, which is based on an artificial scarcity, may draw consumers to social commerce sites, it cannot make consumers purchase products. The factors that create scarcity are unstable and limited. These factors cause consumers to fear missing good offers, which in turn make them visit social commerce sites more often. The positive correlation between scarcity and willingness to pay is well proved [4, 23]. However, these scarcity

attributes cannot guarantee that consumers will actually purchase items. The scarcity heuristic of consumers in a specific social commerce site is only valid within that site. Therefore, the scarcity heuristic exists only within a certain social commerce site and its effect is momentary. Even if consumers miss offers from a certain social commerce site, they might find a similar offer elsewhere. In contrast to the “Disney Vault,” consumers of social commerce can purchase the same or similar products elsewhere. As long as social commerce sites do not offer exclusive products within exclusive timeframes, persistent artificial scarcity (i.e. the Disney Vault case) cannot be created.

Since the scarcity heuristic of social commerce sites is bounded within its own service, the scarcity heuristic of products in social commerce is momentary. In turn, the momentary characteristic of social commerce can change only the attitude toward social commerce and not the product itself. Hence, the momentary characteristics of the social commerce sites positively relate to the visit intention of consumers, but not to the purchase intention of consumers in social commerce sites.

*H1: Momentary characteristic positively influence intention to visit social commerce sites.*

*H1a: Scarcity of time positively influences intention to visit social commerce sites.*

*H1b: Scarcity of quantity positively influences intention to visit social commerce sites.*

*H1c: Provisional coupon positively influences intention to visit social commerce sites.*

*H2: Momentary characteristic do not influence intention to purchase items in social commerce sites.*

*H2a: There is no significant relationship between scarcity of time and intention to purchase items in social commerce sites.*

*H2b: There is no significant relationship between scarcity of quantity and intention to purchase items in social commerce sites.*

*H2c: There is no significant relationship between provisional coupon and intention to purchase items in social commerce sites.*

### **3.2 Persistent characteristic**

In contrast to the visiting intention of consumers to a social commerce site, the purchase intention is decided only by a persistent characteristic. Such characteristics include usefulness of items, trust in the social commerce site, and/or a discount rate on items. Consumers usually decide to purchase certain items or services depending on their value [29]. An actual value of an item is stable and persistent, and it is not bounded in the social commerce site. Consumers expect the price and value of an item or service to be identical regardless of the purchasing place. For example, consumers buy the same items in different stores.

Trust is also a very important factor to consider in social commerce markets. There is much literature emphasizing the importance of trust in online purchasing intentions [5, 9, 12, 22]. Moreover, the suggested retail price on a certain item is not necessarily the final price. With what seems like limitless competition in the global marketplace, the suggested retail price becomes a meaningless indicator of an items' value. If every store offers a discounted price to get the attention of consumers, then discount rates (or discount prices) become the actual price consumers pay. Discount rate extents to consumers are conscious on discount rate of items in SC sites [30]. Therefore, this study focuses on the discount rate of items instead of the retail price.

Consumers judge the value of a certain item or service on the basis of more stable and persistent characteristics, such as discount rates, trust, and usefulness. These factors can increase the behavioral intention of consumers in social commerce, regardless of one's visit and purchase intention. **Table 3** shows the details of operational definitions of measurements in this study.

*H3: Persistent characteristic positively influences intention to visit social commerce sites.*

*H3a: Discount rate positively influences intention to visit social commerce sites.*

*H3b: Usefulness positively influences intention to visit social commerce sites.*

*H3c: Trust positively influences intention to visit social commerce sites.*

*H4: Persistent characteristics do not influence intention to purchase items in social commerce sites.*

*H4a: Discount rate positively influences intention to purchase items in social commerce sites.*

*H4b: Perceived usefulness positively influences intention to purchase items in social commerce sites.*

*H4c: Trust positively influences intention to purchase items in social commerce sites.*

To consider the differences between visit intention and purchase intention, this study exams the relationship between both.

*H5: Visit intention positively influences purchase intention.*

**Table 3.** Operationalization of measurement

Measures	Operationalization	Literatures
Provisional Coupon	The consumers's perception of temporal redeemable coupon offers in SC sites	[16]
Trust	The belief that the social commerce site is honest and benevolent	[19]
Usefulness	The extent to which an individual perceives SC sites to be useful in performing shopping tasks.	[18]
Scarcity of Quantity	The extent to which social commerce sites limit the amount of purchasable products	[28]
Scarcity of Time	The extent to which SC sites limit available time of purchasable products	[28]
Discount rate	The extent to which consumers are conscious on discount rate of items in SC sites	[30]
Intention to Visit	The consumers' conscious plan or intention to visit SC sites	[21]
Intention to Purchase	The consumer's conscious plan or intention to purchase a product in SC sites	[21]

The research model is shown as **Fig. 1**



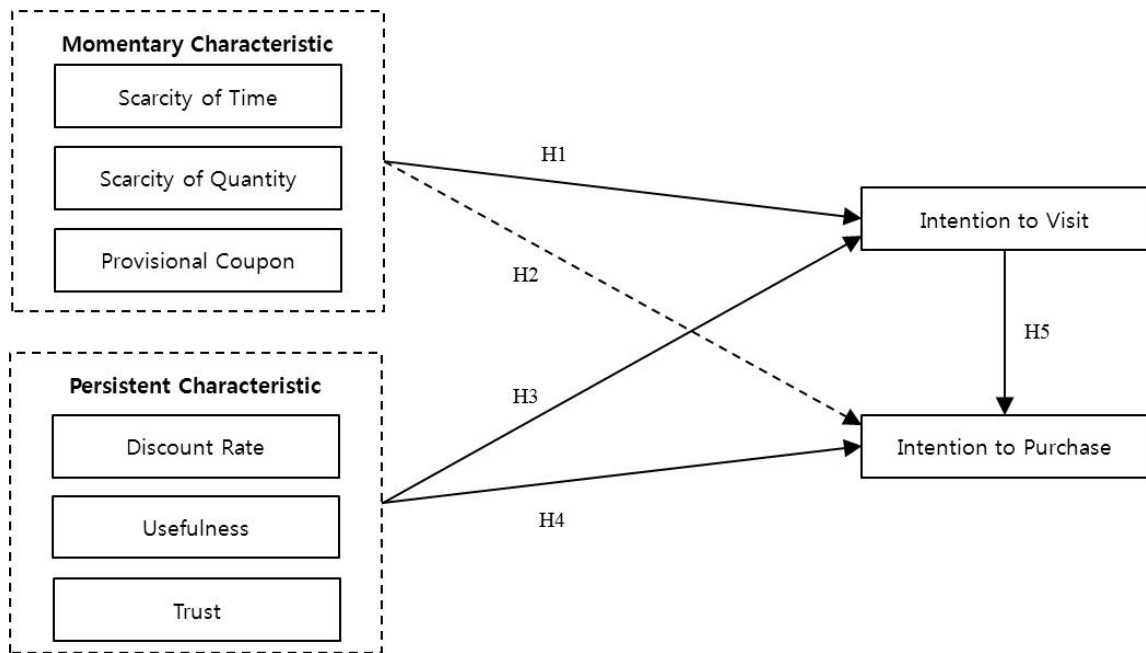


Fig. 1. Research model

### 4. Research Methodology

This study was conducted by taking social commerce as an object of analysis. Accordingly, the sample was collected in South Korea from online panels ([www.opensurvey.com](http://www.opensurvey.com)) using quota sampling. Subjects were aged 20 to 50 years and have used more than one social commerce site. In order to collect data, this study used a pilot test and face-to-face interviews with three specialists; face and content validity were evaluated for questionnaire validity. The questionnaires of the survey are described in Table 4. Through an online panel survey, 350 responses were received. After eliminating outliers and incomplete responses, 324 responses (92.6%) were selected for the final sample.

Table 4. Survey items

Measure	Items		Literature
Trust (Trust)	Trust1	The performances of SC sites always meet my expectations.	[19]
	Trust2	SC sites can be counted on as a good social shopping site.	
	Trust3	SC sites are reliable social shopping sites.	
Scarcity of Quantity (Squan)	Squan1	I think that the current supply of product in SC sites is small.	[28]
	Squan2	I think that the products in SC sites are selling out soon.	
	Squan3	I feel that the limited amount of the purchasable product will cause many people to buy.	
	Squan4	I feel that SC sites provide the limited amount of purchasable products.	
	Squan5	The amount of purchasable products in SC sites is not enough.	



Provisional Coupon (Coupon)	Coupon1	The limited SC coupon offer would give me a feeling of enjoyment if I redeemed it.	[16]
	Coupon2	The temporal SC coupon offer would make me feel right about redeeming it.	
	Coupon3	The limited SC coupon offer would be useful to me.	
	Coupon4	The temporal SC coupon offer would make me feel motivated to continue usage in SC sites.	
Intention to Visit (Visit)	Visit1	I consider visit SC sites.	[21]
	Visit2	I spontaneously visit SC sites.	
	Visit3	I visit SC sites without thinking.	
	Visit4	I would visit SC sites on the spur of the moment.	
Discount rate (Discount)	Discount1	When shopping in SC site, I mostly get cheaper price for same products than others.	Modified from [30]
	Discount2	SC sites usually offer cheaper than others.	
	Discount3	I often receive special price offers when shopping in SC sites	
	Discount4	SC sites suggest cheap offers.	
Scarcity of Time (Stime)	Stime1	I think that available time of purchasing product is limited.	modified from perceived scarcity [28]
	Stime2	I think that the product in SC sites is selling out soon.	
	Stime3	I feel that the limited period of the purchasable product will cause many people to buy.	
	Stime4	I feel that SC sites provide the limited period of purchasable products.	
	Stime5	The purchasable period for products in SC sites are not enough.	
Intention to Purchase (Purchase)	Purchase1	I would consider buying product from this SC sites.	[21]
	Purchase2	Given the chance, I predict that I would consider purchasing products from SC sites in the future.	
	Purchase3	It is likely that I actually purchase products from SC sites in the near future.	
	Purchase4	If I am in need, I would buy product in SC sites.	
Usefulness (Useful)	Useful1	The SC sites will be useful for me.	[18]
	Useful2	The SC sites will make me more efficient.	
	Useful3	The SC sites will make my shopping easier.	
	Useful4	The SC sites provide good-quality information.	

#### 4.1 Demographics of Participants

This research involved 350 respondents who have experiences using social commerce sites from South Korea. **Table 5** presents a summary of the descriptive characteristics of participants. We collected data from customers who use the top three social commerce sites in Korea: Groupon, Ticket Monster, and Coupang.

**Table 5.** Demographics of respondents

<i>Sex</i>	n	%	<i>Visiting Frequency</i>	n	%
Male	140	43.2	More than 7 per a week	48	14.8
Female	184	56.8	5~6 per a week	48	14.8
	324	100	3-4 per a week	84	25.9
			1-2 per a week	100	30.9
			1-3 per a month	40	12.3
<i>Ages</i>	n	%	Below 1a hour per month	4	1.2
Teens	48	14.8			
20s	96	29.6	<i>Visiting Time (Per a month)</i>	n	%
30s	80	25.3	Below 5 hours	176	54.3
40s	64	19.8	5-10 hours	74	22.8
Above 50s	34	10.5	10-15 hours	36	11.1
			15-20 hours	20	6.2
			more than 20 hours	18	5.6
<i>Monthly Purchase cost in Social Commerce (KRW)</i>	n	%	<i>Experience for Social Commerce</i>	n	%
Below 10,000	24	7.4	Below 3 month	76	23.5
10,000~50,000	126	38.9	3-6 month	22	6.8
50,000~100,000	116	35.8	6-9 month	12	3.7
100,000~150,000	30	9.3	9-12month	42	13.0
150,000~200,000	14	4.3	12-15 month	20	6.2
Above 200,000	14	4.3	15-18 month	14	4.3
			More than 18 month	138	42.6

The data showed the sex of respondents who use social commerce sites: male=140(43.2%), female=184(56.8%). The ages of respondents are mostly in the 20s (29.6%) to 30s (25.3%). Seventy-six respondents (23.5%) have used social commerce sites less than 3 months. Forty-two users (13.0%) have used social commerce sites for 9-12 months. One hundred respondents (30.9%) visit social commerce sites 1-2 times per a week.

#### 4.2 Measurements and Validity

The principle component chosen was EFA (Exploratory Factor Analysis), and VARIMAX rotation was conducted. After data reduction using EFA, two items (Squan3, Visit1) were excluded. **Table 6** is the result of EFA measurements.

**Table 6.** The result of EFA

Items	Purchase	Stime	Discount	Squan	Useful	Coupon	Visit	Trust
Purchase1	0.785	-0.001	0.049	0.050	0.308	-0.068	0.025	0.080
Purchase2	0.882	0.002	0.057	0.075	0.259	-0.016	-0.018	-0.005
Purchase3	0.875	0.061	0.073	0.062	0.269	-0.051	-0.031	0.018
Purchase4	0.836	0.041	-0.020	0.033	0.236	-0.057	0.004	-0.028
STime1	-0.128	0.744	0.146	-0.050	0.067	0.034	0.048	0.029
STime2	0.017	0.749	0.024	0.389	0.047	0.101	0.057	0.018
STime3	0.115	0.774	0.074	0.212	-0.037	0.280	0.101	0.053
STime4	0.063	0.741	0.194	0.313	0.056	0.097	-0.085	0.001
STime5	0.056	0.617	0.036	0.392	-0.040	0.149	-0.140	-0.071
Discount1	0.015	0.046	0.793	0.064	-0.059	0.036	0.188	0.185
Discount2	0.117	0.112	0.842	0.087	-0.038	0.114	0.068	0.212
Discount3	0.017	0.119	0.773	0.010	-0.087	0.031	0.282	0.034
Discount4	-0.009	0.186	0.821	0.097	0.051	0.059	0.020	0.156
Squan1	0.058	0.064	-0.002	0.740	-0.074	0.021	-0.081	0.034
Squan2	0.063	0.347	0.028	0.725	-0.005	0.008	0.012	0.106
Squan4	0.040	0.251	0.131	0.686	0.137	0.008	-0.018	0.058
Squan5	-0.007	0.197	0.072	0.794	0.051	0.059	-0.009	-0.104
Useful1	0.312	-0.069	-0.050	0.076	0.815	0.074	0.083	0.003
Useful2	0.251	0.013	-0.051	0.064	0.866	0.018	0.078	-0.012
Useful3	0.444	0.054	-0.072	-0.016	0.783	-0.060	0.016	-0.020
Useful4	0.269	0.063	0.020	-0.083	0.703	-0.047	-0.191	0.068
Coupon1	-0.019	0.140	0.138	0.061	0.082	0.756	0.076	0.161
Coupon2	-0.050	0.063	0.062	0.097	-0.004	0.806	0.052	0.050
Coupon3	-0.074	0.084	0.004	0.033	-0.079	0.861	0.018	0.054
Coupon4	-0.029	0.164	0.016	-0.067	0.000	0.849	0.046	0.007
Visit2	-0.129	0.032	0.054	0.035	0.108	0.063	0.813	0.242
Visit3	0.065	-0.123	0.188	0.098	0.032	0.023	0.709	0.155
Visit4	0.020	0.033	0.180	-0.026	-0.006	0.108	0.804	0.145
Trust1	0.032	-0.094	0.163	0.049	0.030	0.077	0.217	0.811
Trust2	0.008	0.060	0.267	0.049	0.002	0.060	0.211	0.772
Trust3	0.013	0.108	0.137	-0.009	0.006	0.130	0.145	0.791

The questionnaires were reliable according to Cronbach's  $\alpha$  of at least 0.7 for all dimensions. We identified the factors by checking the convergent and discriminant validities with confirmatory factor analysis (CFA) based on partial least square (PLS) (smartPLS).

Convergent validity is the extent to which measures for a variable act as if they are measuring underlying theoretical constructs because they share variance [28]. Convergent validity was tested using the criteria that construct reliability should exceed 0.70 and average variance extracted (AVE) should exceed 0.50. **Table 7** shows a summary of the construct reliability and AVE according to these criteria. The construct reliability for the data was 0.824–0.931. Because these scores were much greater than 0.70, the scores of construct reliability were acceptable. Additionally, each AVE score was ranged from 0.510 to 0.770. These AVE values were well above 0.5. Thus, results of validity tests supported the adequate construct reliability and AVE of the measurements.

**Table 7.** The convergent validity of the proposed model

Constructs	AVE	Construct Reliability	R Square	Cranach's Alpha
Coupon	0.713	0.909		0.868
Discount	0.680	0.895		0.843
Purchase	0.770	0.931	0.598	0.900
SQuan	0.542	0.824		0.723
Stime	0.510	0.835		0.761
Trust	0.731	0.891		0.816
Useful	0.709	0.906		0.862
Visit	0.700	0.874	0.451	0.784

Discriminant validity refers to the degree to which measures of two or more constructs are empirically distinct [28]. To check the discriminant validity of the data, we identified that the square root of each construct's AVE was greater than the correlation of the construct with other latent variables, as shown in **Table 8**. Thus, the validity results supported adequate discriminant and convergent validity. The diagonal score is the square root of AVE for each construct.

**Table 8.** The result of discriminant validity

Constructs	Coupon	Discount	Purchase	SQuan	Stime	Trust	Useful	Visit
Coupon	<b>0.845</b>							
Discount	0.325	<b>0.825</b>						
Purchase	0.395	0.559	<b>0.878</b>					
SQuan	0.215	0.355	0.340	<b>0.736</b>				
Stime	0.369	0.332	0.325	0.512	<b>0.714</b>			
Trust	0.367	0.445	0.567	0.277	0.312	<b>0.855</b>		
Useful	0.421	0.606	0.688	0.295	0.365	0.598	<b>0.842</b>	
Visit	0.408	0.487	0.639	0.386	0.437	0.526	0.549	<b>0.836</b>
AVE	0.713	0.680	0.770	0.542	0.510	0.731	0.709	0.700

### 4.3 Results

We examined the momentary and persistent features of social commerce. We used the collected data to test hypotheses. Fig. 2 presents the results of the structural equation modeling using PLS with respect to the proposed model.

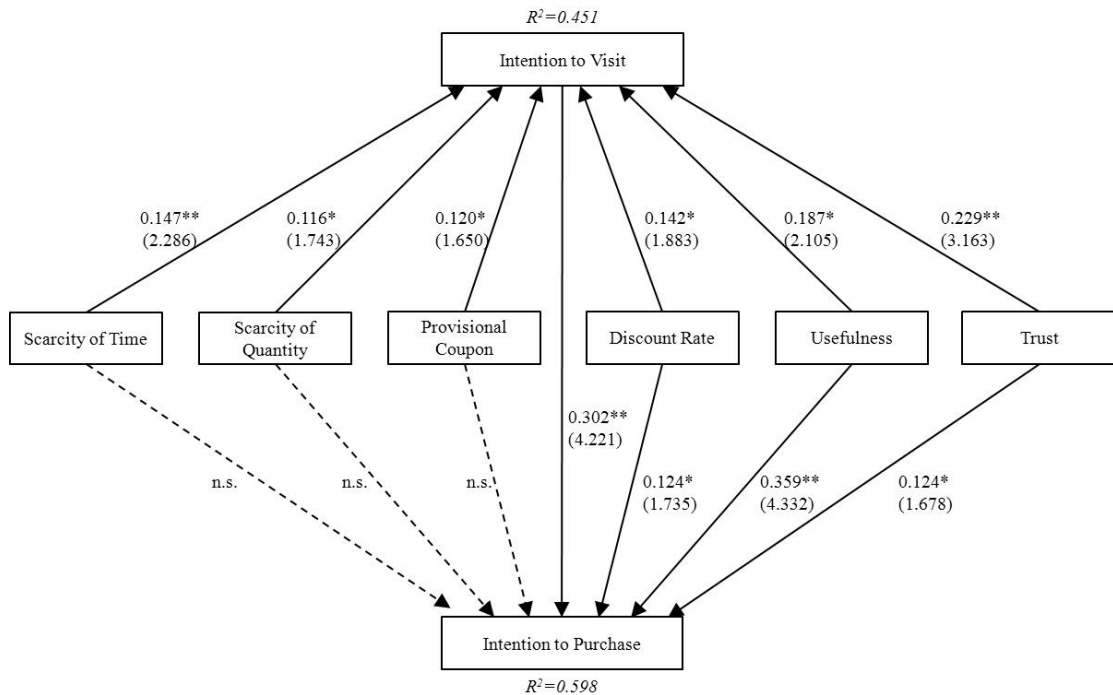


Fig. 2. The PLS results of research model

The following results show relationships between momentary characteristics and intention to visit. The relationship between scarcity of time and intention to visit was significant at  $p=0.000$  (coefficient=0.147,  $t=2.286$ ). Scarcity of quantity affected intention to visit (coefficient=0.116,  $t=1.743$ ,  $p<0.05$ ). Provisional coupons also positively increased intention to visit (coefficient=0.120,  $t=1.650$ ,  $p<0.05$ ). Thus, H1a, H1b, and H1c were supported as expected.

The relationship between scarcity of time and intention to purchase was not significant (coefficient=0.063,  $t=0.954$ ,  $p>0.1$ ). The coefficient of scarcity of quantity and intention to purchase was 0.063 ( $t=0.954$ ,  $p>0.1$ ). Similarly, provisional coupons were not affected by intention to purchase (coefficient =0.046,  $t=0.763$ ,  $p>0.1$ ). As a result, H2 was supported.

For persistent characteristics and intention to visit, the discount rate also was significant at  $p<0.05$  (coefficient=0.142,  $t=1.883$ ). Thus, H3a was supported. Usefulness positively influenced intention to visit social commerce sites at  $p=0.000$  (coefficient=0.187,  $t=2.105$ ). Thus, H3b was supported. The relationship between trust and intention to visit, H3c, was 0.229 at  $p=0.000$  ( $t=3.163$ ).

In the relationships between persistent characteristics and intention to purchase, discount rate (H4a) had a significant effect on intention to purchase (coefficient=0.124,  $t=1.735$ ,  $p<0.05$ ). Usefulness positively affected intention to purchase (coefficient=0.359,  $t=4.332$ ,  $p=0.000$ ). Therefore, H4b was supported. Additionally, the relationship (H4c)

between trust and intention to purchase was supported at  $p=0.000$  (coefficient=0.124,  $t=1.678$ ).

Finally, we tested the relationship between intention to visit and intention to purchase (H5). The coefficient was 0.302 at  $p=0.000$  ( $t=4.221$ ). Thus, H5 was supported.

## 5. Conclusion

The this study show that momentary characteristics and persistent characteristics differently influence customer intentions in social commerce sites. Compared to previous studies on social commerce, this study identified the different roles of momentary characteristics (scarcity of time and quantity, and provisional coupons) and persistent characteristics (usefulness, trust, and discount rate). Especially, this study considered and developed scarcity heuristic perspective of social commerce although previous studies focused on the adopting factors of social commerce.

The findings indicate that the scarcity heuristic is only bounded within social commerce sites. Therefore, momentary characteristics, which are created by the scarcity heuristic, only positively influenced a customer's intention to visit but not their intention to purchase, as we expected. Persistent characteristics positively influence both purchase and visiting intentions. The results of this study implicate that the antecedents of purchase intention are distinct from visit intention.

The theoretical contributions of this study are below. First, this study clarified the distinctions between a purchase intention and a visit intention. Previous research on social commerce has only considered the purchase intention of consumers as an important determinant [7, 13, 14, 17, 19]. However, this study found out that low purchase conversion rates of social commerce, despite high visiting traffic, indicate that the visit intention differs from the purchase intention. By distinguishing visit intention from purchase intention, additionally our results confirm that the scarcity heuristic has a directly positive relationship with the intention to visit social commerce sites. As expected, the scarcity heuristic did not influence the intention to visit social commerce sites because of its momentary characteristics. According to the result, this research found out that the antecedents of visiting intentions and purchasing intentions are different from persistent characteristics.

Second, this study identified the scarcity heuristic of consumer intentions in social commerce sites. To test the role of the scarcity heuristic, this study used a scarcity of quantity and time, and provisional coupons. Although previous studies suggested that the scarcity tactic influences the willingness to pay [23], the results of this study show that the scarcity tactic did not influence the purchase intention. This implies that the scarcity heuristic has a momentary characteristic that exists only within a social commerce site. Contrary to previous studies, the scarcity heuristic influences only the visit intention, not the purchase intention, because of its momentary characteristics. Otherwise, persistent characteristics such as trust, discount rates, and usefulness have impacts on both the intention to visit and purchase. Therefore, this study found that there are two distinct attributes, momentary and persistent, and they influence consumers' intentions differently.

This study also contributes to practical implications for social commerce sites. First, momentary characteristics can attract customers visiting social commerce sites. When there are momentary characteristics, such as limited quantity of purchasable products, time, and provisional coupons, consumers feel pressure to visit social commerce sites. Further, the intention to visit can increase the intention to purchase. Thus, managers of social commerce sites should consider which attributes, such as scarcity of time and quantity, and provisional

coupons, can be more effective for customers visiting social commerce sites. Second, we conducted the role of scarcity in regards to quantity and time, and provisional coupon for purchasing items in social commerce sites. Persistent values like trust, usefulness, and discount rates enabled consumers to visit and to purchase items in social commerce sites. However, the scarcity of quantity and scarcity of time only increased customers' curiosity for items and willingness to visit the site. Provisional coupons can draw customers to sites in order to search for good offers. Thus, social commerce sites should consider strategic use of momentary characteristics in order to induce visits of consumers.

Additionally, to solve current low-purchase conversion rates in social commerce sites, social commerce sites should consider increasing their persistent characteristics. For example, social commerce sites should provide escrow systems in order to prevent inadequate purchases and to improve the trust of consumers in the site. Similarly, in order to improve usefulness, social commerce sites should provide consumers with an attractive selection of items. By providing a low-price guarantee system, consumers may form trust and the expectations of discount rates in relation to social commerce sites.

This study has some limitations. First, our respondents only consisted of Koreans. Although the ages of respondents varied, their cultural backgrounds were similar. Second, future studies should compare the different characteristics of social commerce sites. This study only focused on social commerce itself. Looking at site-specific attributes may offer a deeper understanding of social commerce markets. Third, this study did not consider product-specific attributes. By considering product characteristics, such as hedonic versus utilitarian, future studies may help clarify the role of momentary characteristics.

Nevertheless, this study illustrates the importance of the scarcity heuristic and its momentary characteristics in social commerce. Managers of social commerce sites should consider the scarcity heuristic as a way to persuade consumers to visit and purchase from their site.

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