



# Factors Influencing Customers' Purchase Intention in Social Commerce

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Received: 15 June 2020

Accepted: 25 August 2020

DOI: <https://doi.org/10.32479/irmm.10097>

## ABSTRACT

This paper inspects the relationship between purchase intention in social media context and relevant factors namely: Trust, perceived risk, online behavioral advertising, and social commerce constructs. Using judgmental sampling technique, 384 questionnaires across Lebanon were collected and analyzed using structural equation modeling (SEM). The results show that purchase intention of the respondents is significantly positively affected by social commerce constructs, trust, and online behavioral advertising. And trust is positively enriched by social commerce constructs. Also, it is clear that positive social commerce constructs will decrease the perception of risks between customers when shopping online. Perceived risk influence on purchase intention is not significant, Trust negatively impacts perceived risk. This paper shows specific inferences about the factors affecting buying intention in social commerce. It provides fruitful insights to both academic researchers and professional marketers. In terms of limitations, other factors might be added and be under examination; that might include value perceptions, social presence, social proof, and artificial intelligence agents such as Facebook chatbots. In addition, other product categories are useful to get more insights about the intentions of customers; such as cosmetics, home appliances, phones, and other service industries as cleaning, laundry, financial services, etc. The study attempted to examine potential factors to evaluate the purchase intentions (PI) in the social commerce context in Lebanon. It extends the earlier literature by providing clues about the positive influence of OBA on PI.

**Keywords:** Social Commerce, Online Behavioral Advertising, Trust, Perceived Risk, Purchase intention

**JEL Classifications:** L81, M3

## 1. INTRODUCTION

In the developing nations, there has been an obvious upsurge over the last couple of years in the percentage of people who own a smartphone and use the internet (Poushter, 2016). The advancement of mobile phones and technologies is an extension of long records of revolution and progressions harvested up due to energetic variations in consumers' desires and likings (Sata, 2013). By 2021, it is expected that 1.8 billion people globally will buy products online reaching a value to 4.8 trillion U.S. dollars (Clement, 2019).

The Internet and the Web evolved to a platform for cooperation, sharing, innovation and user-generated-content; this platform is called Web 2.0 environment which consists of social and business systems (such as Social Media, RSS, or APIs, etc...) influencing

what users perform on the Web (Lai and Turban, 2008). Social commerce (S-commerce) is considered as a subset of e-commerce that encompasses deploying social media platforms to support in e-commerce transactions (Liang et al., 2011). It denotes prospective merchandizing chances that mixes shopping and social networking activity together; through Social Media and considered as a novel category of E-commerce (Wang and Zhang, 2012). Social commerce refers to "exchange-related activities that occur in, or are influenced by, an individual's social network in computer-mediated social environments, where the activities correspond to the need recognition, pre-purchase, purchase, and post-purchase stages of a focal exchange" (Yadav et al., 2013).

The Lebanese E-commerce market; including S-commerce, continues its moderate growth both in sales and the number of

online shoppers. According to Nordeatrade (2019), compared to 2.1 million in 2015, there are 2.3 million individuals who bought online in 2016, which signify a yearly growth ratio of 9.5%; in addition; fifty percent (50%) of internet users are persons below thirty years, and they are the most active online users. Also, data shows that, concerning income levels, mid-income category (which is from US\$ 533 to US\$ 1,065) had the most online shopping activity; moreover, their statistics indicates that the top online shopping categories were clothing (44% of online shoppers) and travel services (42% of online shoppers).

Purchase intention is a topic of critical attention to strategy creators and commercial experts, and it is vital to recognize which variables in a certain buyer group impact purchase intention (Halim and Hamed, 2005). It is considered to be a prime input that marketers utilize to project forthcoming sales (Morwitz et al., 2007) and manipulate actions to impact purchasing behavior. Online retail will force bricks-and-mortar shops to attain online presence and offer online shopping (NCSC, 2013).

Risks in online shopping are higher than traditional bricks-and-mortar shopping, whereby customers are not able to sense the products/services that they intend to purchase (Biucky et al., 2017). Online marketers pay for targeted ads due to the propensity of customers to accept relevant ads with relevant content, however some find those kinds of ads creepy, and hate the process of online tracking (Cranor, 2012). The social networks offer variety of communication passages and open social attributes, as rating of products, opinion, forums, argument groups, communities of members and ratings (Maia et al., 2018). In online contexts, shoppers can not truly estimate trust cues of the e-vendor due to incomplete web interaction in comparison to face-to-face dealings (Gefen et al., 2003).

Based on the above mentioned, this research is going to analyze the factors affecting consumers' purchase intention in social commerce context in the Lebanese market, which will comprise the following factors: Perceived risk, Trust, Online Behavioral Advertising, Social Commerce Constructs, by which those factors (trust, social commerce, and perceived risk) are one of the most studied factors in the domain of online purchase intention and adds the most novel factors as well (i.e. online behavioral advertising).

Capturing the motivations and social trends of consumer buying intentions is vital for brands to be capable to plan effective policies regarding content, allocation of budget on ads and its segmentation strategies.

## 2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

### 2.1. Purchase Intention

The connection between behavioral intentions and actions is broadly labeled by the theory of reasoned action (TRA) and the theory of planned behavior (TPB), and the research after TRA and TAM reliably displayed a great association concerning intentions

and actual use (Pavlou, 2003). Behavioral impact, consisting of purchaser retaining, positive word of mouth and enlarged usage are based on improved behavioral intentions, and behavioral impact paves the way to better profitability and additional monetary results (Zeithaml, 2000). Pavlou (2003) defined online purchase intention as "the consumers' willingness to be involved in an online transaction." Purchase intention can be seen as "the probability that the consumer will purchase the product" (Sam et al, 2009). The notion intention refers to the "antecedents that stimulate and drive consumers' purchases of products and services" (Hawkins and Mothersbaugh, 2010). The purchasing behavior of online consumers is linked to how clients make their choices regarding what product or services to purchase online (Meskaran et al, 2013). Therefore, it is vital to inspect the purchase intentions of clients to attain healthier and outpacing financial bottom lines, exceeding those of competitors.

### 2.2. Social Commerce Constructs

Social media paved the way for new channels of networking between online sellers and online shoppers. People can participate in forums and online social communities allowed customers to share their experiences and information and recommend their views to others (Hajli et al., 2017).

Hajli et al., (2014) designated that social commerce constructs is "measured using three dimensions; these are recommendations and referrals, ratings and reviews, and forums and communities." Other researchers named social commerce constructs as social commerce components are being defined as "the presence of comments, ratings and reviews about products"; which is widely known also as the word-of-mouth (Maia et al., 2018). They indicated that social commerce constructs serves as an informal communication regarding the seller or product/service buying, usage, and features that includes the exchange of positive or negative information which allows shoppers to advise their particular consumption-related direction by engaging in electronic word of mouth.

In comparison to traditional e-commerce, the connection between customers in social commerce is closer, and clients share and disseminate more information through social interaction (Yin et al., 2019). Hajli (2012) in his notable research conceptualized social commerce constructs to be studied in relation to purchase intention. The results indicated that one component which is forums and communities is inducing trust and the trust affects the buyer intention in social commerce. Other components which are recommendation and referral and rating and review showed to be insignificant in this model. In fact, trust is shown to have a robust impact and its consequence is noteworthy in encouraging shoppers in s-commerce. Hajli et al. (2014) indicated that social commerce constructs possess a positive impact on consumer trust. Also, social commerce constructs might produce social word of mouth amongst prospective clients concerning novel products and services; which consequently would figure consumer trust. Shanmugam et al. (2016) in Malaysia explored the impact of social support constructs (i.e., emotional and informational) and social commerce constructs in forming trust on virtual communities. Data from Facebook, Trip Advisor and LinkedIn;

was analyzed and the results showed social commerce constructs impacts positively social support, and social support will in turn enhance trust. Hence:

H<sub>1</sub>: Social commerce constructs positively effects trust.

Hansen et al. (2004) demonstrated the new online shopping context might include new sorts of risk, that's why customers are predicted to be more involved in acquiring information and guidance/influence from other customer to finalize their purchase decision. Zhu and Zhang (2010) discuss that popular products be likely to obtain extra reviews, and in turn, such kind of amount of reviews seem be to more credible; consequently, customers will tend to prefer popular reviewed product which is indicated a social cue to decrease perceived risk. The two authors examined online user reviews in consumers' Willingness-To-Pay (WTP) from a risk perspective; and they found that customers evaluate buying uncertainty by means of together online product reviews and online seller reviews. Soleimani et al (2016) showed that the perceived hedonic value and social commerce constructs possess an affirmative effect on intention to shop thru social commerce and negative impact on the perceived risk. Friedrich (2016) through analyzing the elements affecting consumers' adoption of social commerce; has shown clue that social commerce constructs/components positively impact factors such as trust, social presence, ease of use, social support, relationship quality, and familiarity; also they found that consumer intention and behaviors are positively influenced by those social commerce constructs. Social commerce constructs have noteworthy effects on social commerce intention (Hajli and Sims, 2015; Dashti et al., 2016; Kumar and Sharma, 2020). Therefore:

H<sub>2</sub>: Social commerce constructs negatively affects perceived risk.

H<sub>3</sub>: Social commerce constructs have a positive effect on purchase intention.

### 2.3. Online Behavioral Advertising

OBA could be defined as "a type of online advertisement which directly targeting the most related people with the product" (Kusumawati, 2017). Online activities might include browsing the net and search information, purchases, media consumption data (e.g., videos watched or photos viewed), information about application usage, click-through rates, and content of communication like what it being written e-mails or chatted via Whatsapp or posted on social media (Zuiderveen, 2015a).

Rony (2018) conceptualized OBA into three main features: 1- Personalization which is the practice of tailoring web content to match the exact desires of users and to take full advantage of business opportunities aiming to "distribute the right content to the right person at the right time to maximize immediate and future business opportunities," 2- Reciprocity which refers to an obligation by which people tend to return in kind what they've received from others; and 3- Ad content type referring to both verbal and visual content which could considerably impact consumers' attitudes and intentions.

Online behavioral advertising (OBA) is the progressively prevalent exercise of targeting customers with precise online ads based

on their earlier online behavior; and advertisers pay more for targeted ads because customers are more possible to purchases after watching related ad, however, those kind of ads might be appreciated by some customers, while others find them creepy and feel invasive in terms of privacy and tracking modules (Cranor, 2012). Online behavioral advertising research needs more attention from researchers and scholars; little research is being done in this field of advertising.

Barnard (2014) argued that behaviorally targeted online ads (OBA) possess a positive direct influence on purchase intention, yet; OBA might increase creepiness (i.e. breaking privacy and increasing threats) that slightly weakens the total direct effect. OBA expressively affects directly the purchase intention and attitude, and attitude significantly influences the purchase intention. Based on the research's results it was recommended that users' privacy must be deliberated sensibly particularly linked to the tracking and customer profiling for OBA purpose (Kusumawati, 2017). On the contrary, Fachryto and Achyar (2018) conveyed result of their research that showed that OBA threatened consumer privacy. Perceived ad intrusiveness also had positive effect on perceived threat. Attitude is negatively affected by OBA and lastly negative consumer purchase intention toward product which was exhibited through OBA.

Rony (2018) explored the role of reciprocity, personalization, and ad content type of OBA on participants' attitudes toward the OBA, attitudes toward the brand, intention to click the ad, and intention to purchase the advertised product. He found very narrow support for the personalization dimension of OBA. It advocates that personalization does not positively influence shoppers' attitude and intention in all circumstances (known brand vs. unknown brand). It is shown that the reciprocal incentive dimension of OBA such as "instant discount" could positively impact buyers' attitude and intention. Moreover, when reciprocity is supported by a visual ad content type is found to be of better impact. Based on the abovementioned, the study suggests the following:

H<sub>4</sub>: OBA has a negative influence on perceived risk.

H<sub>5</sub>: OBA has a positive influence on purchase intention.

### 2.4. Perceived Risk

Perceived risk in marketing is defined as "the nature and amount of risk perceived by a consumer in contemplating a particular purchase action" (Cox and Rich, 1964). It refers to "a combination of uncertainty plus seriousness of outcome involved" (Bauer, 1967). Dowling and Staelin (1994) referred Perceived risk to "the consumer's perception of the uncertainty and adverse consequences of buying a product or service."

Shopping online is a modern IT related system of direct marketing and is correspondingly perceived by customers as of higher risk, which will make them less likely to shop on the internet (Li and Huang, 2009). Perceived risk of shopping online is "the consumer's subjective perception of potential loss from shopping online" Forsythe et al. (2006). Many facets of perceived risk in online contexts were identified. The most common used and most relevant to our domain of research are as follows: Financial risk referring to "the potential monetary outlay associated with the

initial purchase price as well as the subsequent maintenance cost of the product" (Grewal et al., 1994), Product performance risk denoting "the loss incurred when a brand or product does not perform as expected, is largely due to the shoppers' inability to accurately evaluate the quality of the product online" (Forsythe et al., 2006); Privacy risk noted as "the possibility that online businesses collect data about individuals and use the information inappropriately" (Nyshadham, 2000); and After-sale risk which is the "possibility of loss suffered by the customer after purchasing; such as damaged product, fraud and service guarantee claim" (Ashoer and Said, 2016). Therefore, perceived risk can be argued as a belief concerning the possible ambiguous negative consequences of a behavior and the result credited to that loss (Almoussa, 2014).

In the online setting, there exist a lot of uncertainties in traditional e-commerce or social e-commerce, the perceived risk of shoppers will significantly upsurge (Xu and Wang, 2018). In their study, Gerber et al (2014) aimed to evaluate the influence of perceived risk on online buying intention in South Africa market whereby the results exhibited that perceived risk possess effect on online buying behavior, and that consumers who have no previous purchase transaction online are expected to not make any purchases online in the future. In China, Chen et al. (2015) survey results claimed that different bases of perceived risk carry different impacts to purchase behavior. Perceived risks from individual anxiety created important influences on consumers' satisfaction and re-purchase intention, whereas transaction cost risks impact satisfaction only. Likewise, perceived performance risks had a positive influence on re-purchase intention. In Malaysia, Folarin and Ogundare (2016) study in apparel industry revealed that information privacy risk, financial risk and quality risk have major impact on online shopping intention. Notably, security risk and delivery risks didn't possess a noteworthy effect on online shopping intention.

In contrast, Biucky et al. (2017) study results indicated that subjective norm, perceived ease of use have important positive impact on perceived usefulness, and that perceived usefulness is negatively affected by perceived risk. Besides, perceived usefulness and perceived ease of use have a positive effect on intention to use. Nonetheless, the results indicated a non-significant relationship between perceived risk and intention to use. Also, subjective norm and perceived ease of use have a positive impact on intention to use through perceived usefulness but no impact via perceived risk. Panwar (2018) investigated the perceptions of risk in online shopping environment, the results exposed that product risk, time risk, and privacy risk are negatively correlated with intention to buy. They found that delivery and financial risks are to be with no effect. Product risk is the most substantial in garment industry where customers are uncertain to acquire virtual fashion product and the sensational aspect of touch and feel are important. Yin et al., (2019) studied the impact of perceived risk, trust, and intimacy on consumers' purchase intention in social commerce, in addition to effect of cultural dimensions on the earlier mentioned factors; data were gathered from China and France, and the found that perceived risk exerts a lesser impact on buying intention than trust and

social relations in social commerce. In contrast, Ventre and Kolbe (2020) inspected online buying intention in developing markets by examining the influence of perceived risk, trust, and perceived usefulness of online reviews; and the outcomes showed that PU of online reviews influences trust and online purchase intentions. Trust affects positively intention to buying online, and trust has an inverse relationship with perceived risk. A direct connection between perceived risk and online purchase intention was not found. Based on the above grounds and the debate about the relationship we will propose the following to inspect the nature of connection between risk and intention, hence it is suggested:

H<sub>6</sub>: Perceived risk negatively affects intention to purchase in social commerce.

Claudia (2012) studied the mediating role of perceived risk between trust and purchase intention in Romania. The SEM analysis indicated that trust have a direct and positive effect on buyer intention to purchase, and when adding perceived risk as a mediator, the effect of trust on consumers' intention to buy online has somehow decreased. Thus, the positive impact of trust on intention was reduced due to the mediator effect. The analyses designated that perceived risk has a partially mediating effect between perceived trust and users' intention to buy online. Rashbini (2018) supported earlier research noting that trust, perceived risk, and perceived benefit impact in a direct way the purchase intentions and decisions, and in addition, trust impact buying intentions indirectly by impacting perception of risk. Hence:

H<sub>7</sub>: Perceived risk mediates the relationship between trust and intention to purchase.

## 2.5. Trust

Trust is a crucial element of most commercial and social interactions where doubt is existing; essentially, all exchanges necessitate a constituent of trust, mostly which are transacted in virtual online environment (Pavlou, 2003). Morgan and Hunt (1994) conceptualized trust "as existing when one party has confidence in the exchange partner's reliability and integrity," and they theorized that relationship commitment and trust are necessities for successful relationship marketing with internal partners (e.g., Employees), lateral partnerships (e.g., government, NGO's and competition), supplier partnerships, and buyer partnerships. Mayer et al. (1995) defined trust as "the willingness of a party 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 or control that other party." Also, Trust can be termed as "the belief that the other party will behave in a socially responsible manner, and, by so doing, will fulfill the trusting party's expectations without taking advantage of its vulnerabilities" (Pavlou, 2003).

In online contexts, clients must trust the e-vendor and assure that they will act in an ethical and socially satisfactory mode; or customers will encounter distressing difficulty that may prevent their capability to evaluate the circumstances and accordingly might cease their purchasing activity (Gefen et

al., 2003). Trust in online setting can be defined as “the extent to personal guarantees that the online shop will fulfill their obligations; will behave as expected, and put attention to their customers” (Dachyar and Banjarnahor, 2017). As suggested in the literature, and as of the customer perspective, competence, benevolence, and integrity are the frequent themes in forming trust dimensions. Chen and Dhillon (2003) defined the three dimensions of trust in the setting of a business to consumer interchange as follows: Competence is the company’s ability to fulfill its promises communicated to consumers, and integrity “suggests that a company acts in a consistent, reliable, and honest manner when fulfilling its promises,” while benevolence is “the probability a company holds consumers’ interests ahead of its own self-interest and indicates sincere concern for the welfare of the customers.”

Trust possesses a significant negative impact on perceived risk, and also affect positively purchase intentions; in addition, it is shown that consumers’ perceived risk had a direct negative effect on consumers’ online purchase intentions (Suh et al., 2015). Rashbini (2018) argued that trust had a negative impact on perceived risk. Trust can reduce consumers’ perceived risk and increase consumers’ readiness to buy (Xu and Wang, 2018). Mosunmola et al. (2019) highlighted that trust possess a significant negative influence on perceived risk; the greater the trust in online store the lesser the perceived risk visualized by the online buyer. Therefore, the following hypothesis is purposed:

H<sub>4</sub>: Trust will have a direct negative effect on perceived risks.

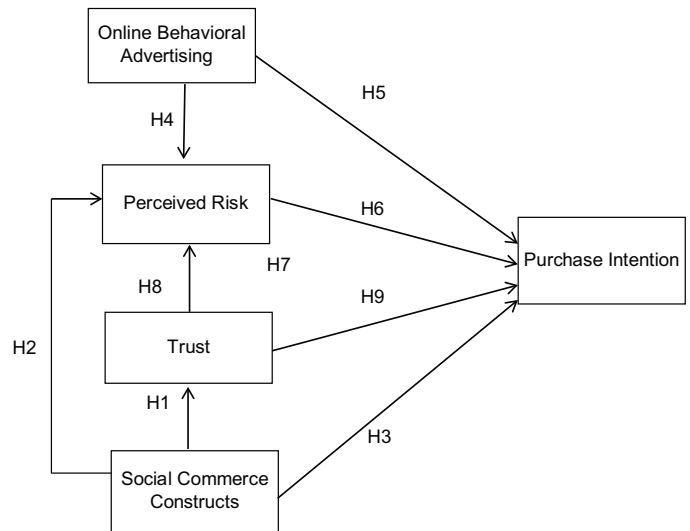
Caused by certain quality deficits; no business these days may sense full safety from a catastrophe, and trust could diminish the damaging effect of such a catastrophe and defend the seller (Delgado-Ballester et al., 2003). A number of sellers have effectively exploited social commerce to improve their commercial activities; however, some of them were unsuccessful in their social commerce policies and received plentiful complaints about trust, security, and privacy in information exchange (Hajli et al., 2017). Thus, trust can decrease online shoppers’ worries regarding commercial exchange, and lessen the complication of communication with retailers, thus encouraging the accomplishment of transactions. Trust is an essential contributing factor to intention to buy (Bruns, 2018). Hajli (2014) argued that social media improves trust and intention to purchase; and trust in turn possesses a chief direct effect on buying intention, in addition to perceived usefulness which was recognized as an significant component. Maia et al. (2018) while inspecting shopper involvement in social commerce found that trust, perceived usefulness and information quality are the most powerful factors affecting involvement. Regarding the types, the results display that customers screen ratings and recommendations on web when shopping products as computers and electronics, and they less do that when shopping products as books, travel, home appliances and apparel products. Given the discussion above, the following hypothesis is proposed:

H<sub>5</sub>: Trust will have a positive direct effect on intention to purchase.

**2.6. Research Framework**

Figure 1 presents the conceptual framework of this paper, which is originated from the hypothesized relationships between

**Figure 1:** Conceptual framework



various constructs from diverse studies explained in the previous chapter.

**3. METHODOLOGY**

Population of the study will include individuals who use social media platforms and who are above 15 years in the Lebanese market; this age group constitutes around 5,113,000 persons i.e., 75.91 % of the total 6,848,981 Lebanese population (United Nations, 2019). From those, 66% are considered to be active social media users (Digital Marketing Report, 2019); thus, 3,881,278 is the approximate number of Lebanese active social media users in the desired age range.

In this research, non-probability sampling is being chosen because there is no sampling frame available. Under nonprobability sampling, Judgmental sampling - also known as purposive- is the technique that will be used in this research; which is a nonprobability sampling technique where which individuals are selected in the sample based on the judgment regarding certain suitable characteristics required of the sample member (Zikmund et al., 2010). Both online and hand-in-hand questionnaires (see Appendix), were distributed to the respondents who are eligible to answer. For many management and marketing research, the approximation of the population’s characteristics is at 95 per cent confidence level (certainty or probability that the results will be correct) with a tolerable error up to 5% (percentage that the results varies from the real population value). That is being assumed; Saunders et al. (2012) provided a table for the minimum required sample size based on population number (i.e. >1,000,000 in our case) and allowed margin of error which implied that for a margin error of 5%, a sample size of 384 would be appropriate.

**4. ANALYSIS AND RESULTS**

Eventually, 384 respondents participated in the survey; Table 1 offers statistics about their personal characteristics, in terms of gender, age, marital status, region, education, and income. The contributors’ breakdown is as follows: majority of respondents

**Table 1: Profile of respondents sample (n=384)**

Characteristic	Count	%
Gender		
Male	174	45.3
Female	210	54.7
Age		
15-25	107	27.9
26-35	192	50.0
36-45	65	16.9
46-55	18	4.7
56-65	1	0.3
>66	1	0.3
Relationship status		
Divorced	9	2.3
In Relation	9	2.3
Married	161	41.9
Single	203	52.9
In a relationship	1	0.3
Widowed	1	0.3
Education		
Elementary	3	0.8
High school	37	9.6
Bachelor	208	54.2
MS	111	28.9
PhD	25	6.5
Area		
Beirut	190	49.5
Bekaa	119	31.0
Mount Lebanon	55	14.3
South	10	2.6
North	10	2.6
Income		
<500\$	80	20.8
500-1500	180	46.9
1501-2000	67	17.4
2001-2500	26	6.8
2501-3000	15	3.9
3001-3500	4	1.0
3501-4000	3	0.8
>4000\$	9	2.3

are young; were 77.9% of the participants are between 15 and 35 years; 45.3 were male and 54.7% were females; 41.9% were married and 52.9% were single; 83.1% are holding bachelor and master's degrees. Almost half of respondents are having income between 500\$ and 1500\$.

Most of the respondents are educated and are of university level degrees, whether undergraduate or post graduate. The majority of respondents are of an income level between 500\$ and 1500\$.

Table 2 provides data on the social shopping experience indicating the favorite social media network used, and the devices used for online shopping. The major two prevalent social networks used for online shopping are Facebook and Instagram; and mobile is the most used device.

Cronbach's alpha was used to observe the reliability of scales. Table 3 shows the values for each construct. To achieve satisfactory values, we modified the social commerce constructs scale, whereby SCC1 was removed, to obtain satisfactory value for reliability. All of the values are above 0.6, which are acceptable (Berthoud, 2000a).

**Table 2: Social shopping experience (n=384)**

Characteristic	Count	%
Favorite social media network		
Fb	169	44.0
Fb-insta	54	14.1
Fb-insta-others	2	0.5
fb-insta-snap	8	2.1
Fb-insta-twitter	10	2.6
Fb-insta-snap-twitter	1	0.3
Fb-others	2	0.5
Fb-snap	2	0.5
Fb-twitter	20	5.2
Insta	92	24.0
Insta-others	5	1.3
Insta-snap	1	0.3
Twitter	2	0.5
Others	16	4.2
Devices used in social media shopping		
Desktop	2	0.5
Ipad	2	0.5
Mobile	302	78.6
Mobile-desktop	41	10.7
Mobile-desktop-ipad	8	2.1
Mobile-ipad	26	6.8
Others	3	0.8

**Table 3: Reliability coefficients for each construct**

Construct	Number of items	Cronbach's alpha
Trust	6	0.855
Perceived risk	4	0.716
Social commerce constructs	3	0.799
Online behavioral advertising	3	0.600
Purchase intention	3	0.879

Using AMOS 24, a structural equations model (SEM) approach is utilized to analyze the data collected from the respondents, using maximum-likelihood estimation procedure. It was done through two-folded manner: the measurement model and the structure model. We will examine the measurement model i.e., the CFA results at first and then go through the outcomes revealed of the structural model evaluation.

**4.1. Measurement Model Assessment**

A confirmatory factor analysis (CFA) was taken to examine the measurement model based on overall model fit and other evidences of reliability and validity. The outcomes briefed in Table 4 demonstrate the results which confirm that measurements evidently are within the thresholds criteria suggested by Hu and Bentler (1999), CMIN/DF=1.601 (between 1 and 3); confirmatory fit index (CFI) of 0.982 (>0.95), standardized root mean residual (SRMR)=0.037 (<0.08), root mean square residual (RMSEA)=0.40 (<0.06).

To examine convergent validity of the measurements, many ways could be deployed as: factor loadings, composite reliability (CR) that refers to “the total amount of true score variance in relation to the total scale score variance” (Brunner and Süb, 2016), and average variance extracted (AVE) which denotes “the percentage of the variance of the measurement items that can be accounted for by the constructs relative to

**Table 4: Measurement model assessment (CFA)**

Factor	Item	Stand. coeff.	CR	AVE	MSV	Goodness of fit
Trust	T1	dropped	0.820	0.543	0.191	CMIN=70.461 DF=44.000 CMIN/DF=1.601 CFI=0.982 SRMR=0.037 RMSEA=0.040
	T2	0.86				
	T3	0.81				
	T4	0.72				
	T5	dropped				
	T6	0.70				
Perceived risk	PR1	dropped	0.704	0.552	0.118	
	PR2	0.87				
	PR3	0.59				
	PR4	dropped				
Social commerce constructs	SCC1	dropped	0.741	0.588	0.435	
	SCC2	dropped				
	SCC3	0.77				
	SCC4	0.77				
Online behavioral advertising	OBA1	0.70	0.671	0.505	0.434	
	OBA2	0.73				
	OBA3	dropped				
Purchase intention	PI1	dropped	0.826	0.704	0.388	
	PI2	0.85				
	PI3	0.83				

Some items were dropped from the initial measurement scale, to improve the validity measurements

the measurement error” (Hong and Cha, 2013), whereby factor loadings should be >0.5, and AVE >0.5 (Hair et al., 2014), CR >0.6 (Fornell and Larcker, 1981). Hence, all values surpass the looked-for level.

To inspect discriminant validity, we could utilize two ways, first compare average variance extracted (AVE) with maximum shared variance (MSV), which is the square of inter-correlation between two constructs; and it is obvious that the MSV values are less than AVE values for all the constructs which indicates the presence of discriminant validity (Rebello-Pinto et al., 2014). The second option is to examine the correlation between two constructs to be less than the square roots of AVE (Fornell and Larcker, 1981). Outcomes depicted in Table 4 depicts that AVE are greater than MSV values, and Table 5, shows that the AVE in the diagonal exceeds the correlation results between constructs, which implies the discriminant validity.

**4.2. Structural Model Assessment**

The results gained in the first estimation of the model backs all the proposed causal relationships except for the influence of Online behavioral advertising on purchase intentions; and the effect of perceived risk on purchase intention, and the mediation effect of perceived risk between trust and purchase intention (i.e., H<sub>4</sub>, H<sub>6</sub>, and H<sub>7</sub>). The structural model designated an excellent fit (as shown in Table 6) matching the cutoff criteria recommended by Hu and Bentler (1999), generating a CMIN/DF of 1.742, CFI of 0.978, SRMR of 0.047, and a RMSEA of 0.044.

Therefore, the theorized model was reformulated to eliminate the non-significant associations.

Each of the proposed hypotheses was tested. The results shows that H<sub>1</sub> is supported which proposed a positive direct relationship between social commerce constructs and trust (β 0.323, P ≤ 0.001). H<sub>2</sub> predicting a negative relationship between social

**Table 5: Correlations and square root of AVE**

Construct	T	PR	SCC	OBA	PI
T	<b>0.730</b>				
PR	0.222	<b>0.743</b>			
SCC	0.287	0.343	<b>0.767</b>		
OBA	0.360	0.151	0.660	<b>0.711</b>	
PI	0.436	0.121	0.583	0.623	<b>0.839</b>

Diagonal bolded numbers are square root of AVE scores. T: Trust; PR: Perceive Risk; SCC: Social Commerce Constructs; OBA: Online Behavioral Advertising; PI: Purchase Intention

**Table 6: Model fit index summary**

Index	Score	Threshold Hu and Bentler (1999)	Interpretation
CMIN/DF	1.742	Between 1 and 3	Excellent
CFI	0.978	>0.95	Excellent
SRMR	0.047	<0.08	Excellent
RMSEA	0.044	<0.06	Excellent
PClose	0.713	>0.05	Excellent

commerce constructs and perceived risk (β 0.427, P ≤ 0.001). The suggested positive relationship between social commerce constructs and purchase intention (H<sub>3</sub>) was also supported (β 0.427, P ≤ 0.01). The negative influence of online behavioral advertising on perceived risk was not significant (H<sub>4</sub> is not supported). H<sub>5</sub> which states that there is a positive influence from online behavioral advertising on purchase intention was supported (β 0.336, P ≤ 0.001). The negative direct effect of perceived risk on purchase intention H<sub>6</sub> is rejected, and therefore the mediation effect of perceived risk between trust and purchase intention was also rejected (H<sub>7</sub>). The suggested direct negative influence of trust on perceived risk was significant (β 0.137, P ≤ 0.05), and this H<sub>8</sub> was supported. Lastly; the advocated positive direct effect of trust on purchase intention (H<sub>9</sub>), was supported (β 0.258, P ≤ 0.001). Table 7 demonstrates the final model results acquired from testing the structural relationships between constructs.

**Table 7: Outcomes of structural model assessment**

Hypothesis	Relationship	Direction	Std. beta $\beta$	Significance	Conclusion	R-squared
H <sub>1</sub>	SCC→Trust	+	0.323	P≤0.001	Supported	0.10
H <sub>2</sub>	SCC→PR	-	-0.427	P≤0.001	Supported	0.16
H <sub>3</sub>	SCC→PI	+	0.323	P≤0.01	Supported	0.49
H <sub>4</sub>	OBA→PR	-	-0.183	ns	Rejected	
H <sub>5</sub>	OBA→PI	+	0.336	P≤0.001	Supported	
H <sub>6</sub>	PR→PI	-	0.098	ns	Rejected	
H <sub>7</sub>	T→PR→PI	mediation	0.014	ns	Rejected	
H <sub>8</sub>	T→PR	-	-0.137	P≤0.05	Supported	
H <sub>9</sub>	T→PI	+	0.258	P≤0.001	Supported	

(+) is a positive relationship, (-) is a negative relationship, (ns) is not significant

## 5. CONCLUSION AND DISCUSSION

In relevance to the results of hypotheses testing, the main research conclusions are as follows. The purchase intention of the respondents is significantly positively affected by social commerce constructs. This is consistent with earlier research Friedrich (2016), Hajli et al. (2015), Dashti et al. (2016), and Kumar and Sharma (2020). Trust is positively improved by social commerce constructs, this is in line with earlier research Yin et al. (2019), Hajli (2012), Hajli et al. (2014), and Shanmugam et al. (2016). Also, it is clear that positive social commerce constructs will decrease the perception of risks between customers when shopping online; and this is similar to outcome of other studies Hansen et al. (2004), Zhu and Zhang (2010), and Soleimani et al (2016).

It is revealed that online behavioral advertising is a key determinant of intention to purchase; this is compatible with previous literature Barnard (2014), Kusumawati (2017) and Rony (2018). On the contrary, the negative effect of online behavioral advertising on perceived risk is not significant and it contradicts with previous studies Barnard (2014) Kusumawati (2017) and Fachryto and Achyar (2018). This would need a further research and other studies to examine this kind of linkage.

Perceived risk influence on purchase intention is not significant, this is compatible with Biucky et al. (2017) Yin et al. (2019) and Ventre and Kolbe (2020), yet; the results are in contrast to the outcomes of other studies Gerber et al (2014), Chen et al. (2015), Folarin and Pgundare (2016), and Panwar (2018). So, the controversy in results between studies is interesting and needs deeper examination, and more research. Moreover; there is no mediation effect of perceived risk between trust and purchase intention, which is a result different from outcomes in other studies Claudia (2012) and Rashbini (2018). Trust negatively impacts perceived risk, and this is in line with Suh et al. (2015), Rashbini (2018), Xu and Wang (2018) and Mosunmola et al. (2019). In addition, trust affects purchase intention positively, and considered an important factor in determining the intention to buy clothes, among customers in social media setting. This is consistent with Hajli, (2014), Maia et al. (2018), Bruns (2018).

In sum, OBA and SCC are two key determinants of intention to purchase clothes in social media networking sites. Trust is also vital in determining the willingness. It is shown that recommendations and referrals, ratings and reviews, and forums and communities,

all of these can enhance the probability to buy and improve trust beliefs toward online sellers and their products.

### 5.1. Theoretical and Practical Contribution

This paper sheds the light on the role of online behavioral advertising, social commerce constructs, trust and their positive impact on buying intentions via social networking sites. Vendors on social media would implement online advertising strategies stressing on video content and customizing the adverts toward their relevant customers. Also, online stores would build on their positive reputation among users whether through social commerce constructs including recommendations and referrals, ratings and reviews, and forums and communities. Keeping an eye on the electronic word of mouth (e-wom) and on what way customers are mentioning your brand is very essential. Positive reviews ratings, referrals, would have apposite impact on trust as well. Trust is another pillar in online relationships, so it is vital to build trust bonds between buyers and vendors in social media. It will enhance perception of risk, and increase purchase intentions, which ultimately will improve actual buying patterns and sales volumes and values.

### 5.2. Limitations and Future Research

Some limitations are present in this study. Firstly, this study evaluates intention to purchase and not actual purchase behavior. Additional research would extend the model to include actual behavior assessment. Moreover, other factors might be added and be under examination; that might include value perceptions, social presence, social proof, and artificial intelligence agents such as Facebook chatbots. In addition, other product categories are useful to get more insights about the intentions of customers; such as cosmetics, home appliances, phones, and other service industries as cleaning, laundry, financial services, etc. Furthermore this study was geographically bounded to the state of Lebanon; future research would examine the model in other geographical contexts in the Arab world or around the globe. Lastly, it would be worthy to investigate the effect of demographic traits, or any social/cultural differences in one comparative study with two or more nations.

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## APPENDIX

### All items were measured using 5-point Likert scale

#### Trust - Pappas et al. (2017)

- T1 - I believe that vendors on social media would act in my best interest
- T2 - I expect that vendors on social media are well-meaning
- T3 - I would characterize vendors on social media as honest
- T4 - Overall, social media sites are effective in providing trustworthy vendors from which I can purchase
- T5 - On social media, I can find excellent vendors for purchasing clothes
- T6 - Vendors on social media would keep their commitments

#### Perceived risk - Yin et al. (2019)

- PR1 - I am worried about the quality of the product and the situation that I might buy fake goods
- PR2 - Commodities maybe damaged in transit
- PR3 - My personal information may be leaked
- PR4 - After sales service may not be guaranteed

#### Social commerce constructs - Shanmugam et al. (2016)

- SCC1 - I will ask my friends on forums and communities to provide me with their suggestions before I go shopping for a new product
- SCC2 - I am willing to recommend a new product that is worth buying for my friends on online communities
- SCC3 - I am willing to share my own shopping experience of a new product with my friends on forums and communities or through rating and reviews
- SCC4 - I would like to use people's recommendations to buy a new product

#### Online behavioral advertising - Rony (2018)

- OBA1 - Ads on social media offer me some benefits in exchange of click
- OBA2 - Ads on social media are directed to me personally
- OBA3 - Regarding the Ad, I think visual content is better than text only

#### Purchase intention - Ashoer and Said (2016)

- PI1 - I would like to purchase a product from social media
  - PI2 - I would like to recommend my friends or family to purchase a product from social media
  - PI3 - If there is a product that I want to purchase, I would like to use the social media
-