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Factors and characteristics that influence consumers' participation in social commerce

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Abstract

Purpose – The popularity of social networks has created business opportunities to the electronic commerce environment, being recently named as social commerce. The purpose of this paper is to analyze – from the perspective of the consumer – the main factors and characteristics (personal or related to the products bought) that have influenced consumers to participate in social commerce buying, recommending, comparing and sharing information about products and services in online marketplace and communities.
Design/methodology/approach – The study is characterized as an exploratory descriptive research, operationalized through a survey, applied to 229 participants of the social network Facebook. The research involves a qualitative stage for identifying potential variables that influence the participation of consumers in social commerce, followed by a quantitative one, including data collection procedures, validation and data analysis.
Findings – The results show trust, perceived usefulness and information quality as the factors that most influence consumer participation in social commerce, being trust in the website the main predictor. Concerning the characteristics, the findings also show that more expensive products and products classified as computers and electronics use ratings, recommendations and comments online more intensively than books, travel, household appliances and fashion products.
Research limitations/implications – As limitations of the study, the authors highlight the small number of interviews conducted during the qualitative stage, which may have left out other relevant factors of the analysis on consumers' participation in social commerce. Another limitation refers to the selection of the participants of the study; all members of the social network Facebook are identified by the contact net of the authors – though it has been tried to enlarge this contact list by requesting the respondents to share the questionnaire link with their acquaintances, we should be cautious about the generalization of the results.
Originality/value – The study proposes an instrument to identify factors and characteristics that are taken into consideration by the consumers when participating in social commerce. Such a tool can be replicated by firms included in this type of commerce, in order to evaluate the behavior and perception of their customers about their performance in the online environment. This study also highlights trust, information quality and perceived usefulness of the website as the most influencing factors of the consumers' participation in social commerce. In addition, the authors identified that more expensive products and products classified as computers and electronics seem to use more intensively ratings, recommendations and comments online provided by other people. This fact supports the research literature that (positive or negative) online recommendations influence the consumers purchase behavior, reducing uncertainties about the products and increasing credibility and trust.

Keywords Social media, Participation, Social commerce, Electronic commerce, Social networking sites (SNS)
Paper type Research paper

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Introduction

During the last few years, the growing popularity of social networking sites (SNS) has generated several changes, both socially and electronically, originating a new type of e-commerce, which has been changing the way online shopping has been done, called social commerce or s-commerce (Zhou *et al.*, 2013, Chen and Shen, 2015). Social commerce promotes transactions with the support of a large network of online peers (formed by friends, colleagues, acquaintances or unknown people) who share electronic shopping experiences related to products and services information. In this environment, social media (represented by SNS and social shopping, blogs, Wikipedia, as well as content-sharing sites like the YouTube) combine different content generated by users through many social network resources to create, initiate and spread information within online networks (Tang *et al.*, 2012). Social commerce is related, then, to the use of social media to perform business transactions and commercial activities driven mainly by social interactions and users contributions (Liang *et al.*, 2011; Wang and Zhang, 2012).

The option for social commerce is given many times due to the amount of trustworthy information on certain products and services which are exchanged by their own members and that reflects mainly at obtaining the best prices in purchasing (Kim and Park, 2013). Social media users are encouraged to participate of social commerce, selling, comparing, recommending and sharing information about products and services in both online and offline marketplaces, and in communities. They can also exchange information with their friends and communities about product factors and characteristics that can help in purchasing decisions (Zhou *et al.*, 2013). Nowadays, more than 90 percent of Brazilian internet users are connected to at least one social network, being Facebook the most used (Secretaria de Comunicação Social, Presidência da República, Brasil, 2015). According to Rakuten (E-commerce News, 2014), a company specialized in electronic commerce, 66.1 percent of people evaluate and recommend products regularly on social media sites, which shows the growing use of social media in the community interactions and electronic commerce activities (Hajli, 2015). The same report has identified, though, that some markets have seen "social fatigue" set, term used to indicate a drop in the number of people recommending products that they have bought on social networks (Lee *et al.*, 2016).

From the perspective of the organizations, social commerce has a great potential to generate value from online social interactions between consumers (Stephen and Toubia, 2010). According to Burson-Marsteller (2013), 87 percent of the world's major companies are in at least one social network. In the academic field, social commerce has been identified as a relevant research theme, especially because of the potentially income generation for organizations (Turban *et al.*, 2010). However, several companies that participate in the electronic commerce market are still trying to find out which factors influence consumers to participate in social commerce (Turban *et al.*, 2010; Zhou *et al.*, 2013; Zhang *et al.*, 2014), either buying, recommending, comparing or sharing information about products and services in online markets or communities. Overall, the majority of publications on this phenomenon appeared in commercial magazines, blogs, posts, industry reports and publications of practitioners, concerning the academic field at conducting studies dealing with its theoretical foundations, concepts and features, evolution and applied business models (Liang and Turban, 2011; Rosa *et al.*, 2014; Friedrich, 2016; Busalim and Hussin, 2016).

Although some studies have empirically explored the main reasons of adopting social commerce by consumers, the literature does not present a clear understanding of which factors have influenced consumers to participate in social commerce, suggesting that new studies on this theme are needed (Turban *et al.*, 2010; Zhou *et al.*, 2013; Friedrich, 2016). Thus, assuming social commerce as a new and promising theme for future studies in

business, as well as in the field of information systems, marketing and consumer behavior, we propose the following research question:

RQ1. What factors do influence consumers to participate in social commerce?

The research aims to analyze – in the consumers' perspective – the main factors and characteristics (personal or related to the purchased products) that influence consumers on their participation in social commerce, either by purchasing, recommending or continuing to use the website.

Literature review

This section provides an overview of social commerce, contextualizing its evolution, as well as the factors that have been highlighted in the literature as potential consumers' influencers in social commerce.

Social commerce

Recent advances in IS area and the emergence of the Web 2.0 technologies have brought new opportunities to electronic commerce (Hajli, 2015). The social connections and people interactions on the internet, especially in social networks, have developed e-commerce to social commerce, which has enabled companies to reach consumers with greater efficiency than traditional retail outlets by integrating user-generated content (Zhou *et al.*, 2013).

Current literature provides a variety of social commerce definitions. Stephen and Toubia (2010) define it as a way of social media based on internet that allows people to actively participate in the marketing and selling of products and services in online markets and communities. The social networks on the electronic commerce are presented by the diversity of communication channels and available social features, such as products rating, feedback, forums, discussion groups, participant communities (in games) and rating about quality, reliability and approval, as the bottom Like on Facebook.

According to Liang and Turban (2011), the social commerce websites have three major attributes: the presence of social media technologies, community interactions and commercial activities, making possible the information exchange about products before the actual purchase. According to Rosa *et al.* (2014), there are two main forms of social commerce. The first one is characterized by sites of social networks that offer space for advertisement and transactions such as buying and selling products and services, opening its interfaces to facilitate this process, like Facebook, LinkedIn and YouTube. The second is characterized by traditional e-commerce websites that use social networking capabilities to take advantage of its power of reach and trust, like Amazon.com, Netshoes, Ponto Frio, Americanas, etc.

Factors that influence the participation of consumers in social commerce

Social commerce is closely related to e-commerce. In this sense, the basic theories used to explain the e-commerce adoption are also used to explain the participation of the consumers in social commerce (Liang *et al.*, 2011; Wang and Zhang, 2012). Based on the IS literature, the participation in electronic commerce can be defined as "the consumers engagement in online exchange relationships with Web vendors" (Pavlou and Fygenson, 2006, p. 115).

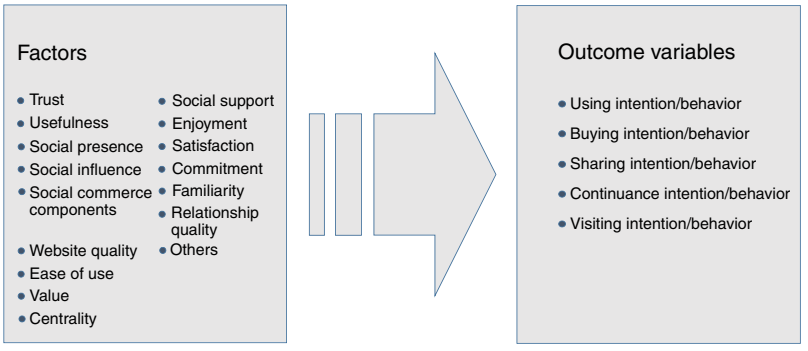
In the case of social commerce, the participation of consumers includes both direct and indirect commercial transactions. Direct transactions refer to the consumer's buying behavior during the purchase phase of his/her decision-making process. On the other hand, indirect transactions include electronic word-of-mouth (e-WOM) referral activities within the defined purpose, information search, selection process and after-sales of customer decision-making process, being characterized by requests and business information sharing on social media (Zhang *et al.*, 2014).

Aiming at identifying factors that influence consumers in the participation of social commerce, we found different studies addressing several aspects associated with this theme. In our search, we found a systematic review elaborated by Friedrich (2016), who identified in 61 academic publications a list structured by factors related to the adoption of social commerce by consumers (Figure 1). We also revised other studies, which completed the list of variables with those aspects not found on Friedrich's (2016) study.

One of the factors that have received most attention in the literature about social commerce is trust. Gundlach and Murphy (1993) suggest that the variable trust is the most accepted as basis for the human interaction and for the exchanging relations, making the person believe that the other part will perform their obligations without acting badly. In this sense, social commerce by including social interactions of the consumers can act as a tool to increase the trust on companies. Thus, it is understood that trusting a website can be an important factor that motivates the consumer to participate in social commerce.

The social commerce components are another relevant factor, being defined by Hajli (2013) as the presence of comments, ratings and reviews about products – that are referred by many authors as the word-of-mouth. Berger (2014) defines word-of-mouth as an informal communication directed to other consumers about the purchase, use, characteristics of certain products and services or their sellers. This communication involves the exchange of information done directly between individuals, being positive or negative, not requiring any other means. The advances of the internet has extended consumer's options for collecting product information from other consumers and provides new opportunities for consumers to offer their own consumption-related advice by engaging in e-WOM (Hennig-Thurau *et al.*, 2004). In this sense, Grund and Gürtler (2008) suggest that the system of recommendation comes up as an important instrument for the construction of the sellers' reputation, aiming to reduce the consumers' uncertainty about the products. So, companies should identify and encourage buyers and opinion influencers to provide positive information about their products through their SNS (Tubenchlak *et al.*, 2015).

The perceived usefulness of the website is also identified as a relevant factor of social commerce. Its concept was introduced in the IS field for the first time by Davis, in 1989, and has been tested and validated by several researchers since then. Davis defined that people tend to use or not certain technology, as they believe that it will help them perform their activities better. Venkatesh *et al.* (2003) defined perceived usefulness as performance expectation, that is, the level in which the use of a technology will provide benefits to the users on performing certain activities and as a person believes that the use of a certain system increases her/his performance at work, therefore, being considered a factor that motivates consumers to participate in social commerce.



Source: Adapted from Friedrich (2016)

Figure 1.
Factors and outcome variables of adopting social commerce

Another important factor that can motivate the consumer to take part in social commerce is the system or website ease of use. Davis (1989) theorized as perceived ease of use when users notice that it is easy to use a system and does not demand great efforts. Such definition gets close to the one presented by Flavián *et al.* (2006) that associate the perceived usability of a website or system to the perception of the ease of understanding the structure of a system, the website simplicity of use, the speed users can find what they are looking for and the ability of the user to control what they are doing when surfing in the website.

Kim and Park (2013), on the other hand, suggest that the quality of the information available in the website is also a determining factor of the consumer's trust in social commerce. The quality of a website, for example, can be related to the relevance, accuracy, comprehension and utility of the information provided by it. So, the consumers tend to trust in websites that provide precise and timely information, motivating them to participate in social commerce.

It is also highlighted in the literature the reputation as another important factor to motivate consumers to participate in social commerce. According to Doney and Cannon (1997), the reputation of a company is defined as the measure in which consumers believe that the company is honest and concerned about its customers. In social commerce, users tend to consider the reputation of a company as an important factor while evaluating their trust in the company and products and services purchasing (Kim and Park, 2013).

Methodology

The study is characterized as an exploratory descriptive research, operationalized through a survey, applied to 229 participants of the social network Facebook. From this total, we excluded five cases of the study for presenting too many questions in blank or using only one point in the Likert scale in all answers, totalizing 224 valid questionnaires. We requested to the respondents to select one of their last online shopping or research experiences to answer the proposed instrument. We performed the research in the first semester of 2016, involving a qualitative stage to identify potential variables that influence the participation of consumers in social commerce, followed by a quantitative one, including data collection procedures, validation and data analysis. Next, we present in details both stages of the research.

Qualitative stage

At the qualitative stage we performed in-depth interviews with eight experienced consumers of products and services acquired through electronic commerce websites. We selected the interviewees by convenience, identifying consumers with different sociodemographic profiles (in terms of gender, age, schooling, occupation, income and products bought through internet). The interviews were done individually lasting approximately 20 minutes, aiming at identifying characteristics and aspects taken into account by consumers when participating – or not – in social commerce. For such, we developed semi-structured guidelines, containing questions such as online shopping frequency, the kinds of products they are used to search or buy on the internet, the most accessed websites and the characteristics considered most important to perform the purchasing. We also requested that the interviewee described his/her last searching online experience and which factors influence them when deciding to buy or not a product. Finally, we asked the respondents to analyze if comments and ratings about the products available on the websites and social networks influenced on their purchasing decision. We developed the interview guidelines based on the theoretical background present in the research besides the adaptation of some questions from other instruments applied in earlier studies (Kim *et al.*, 2008; Kim and Park, 2013). We used the categorical analysis technique as

a manner to analyze the data collected in the interviews, being the categories identified through interpretive procedures (Bardin, 2009).

This stage confirmed some of the most frequent factors cited in the literature as those influencing consumers' participation in social commerce. We identified that the majority of the interviewees emphasizes the website transaction safety as fundamental when doing their shopping, as well as they first search for complaints about the visited websites, claiming trust in the website as an important requirement to be achieved when purchasing. The fact of the website is a well-known site or does not have many complaints is a way of ensuring the consumer that the purchasing is safe. Regarding the kind of products, the interviewees informed that they buy all sort of products on the internet, such as household appliances, electronics, books, airline tickets, furniture, clothes and beverages. Yet, they highlighted the product price as another elementary factor on the purchasing decision, as well as the importance of delivery time, costs of shipping and means of delivery. In this case, the customer can even abandon the purchase due to a longer delivery time than the concurrent.

The qualitative stage results suggest the following factors as influencers of the consumers' participation in social commerce: price, transaction safety, trust, information quality, ease of use, perceived usefulness, social commerce components, product delivery and reputation.

Quantitative stage

From the results obtained on the previous stage, we proceeded to the development of the questionnaire. With exception of the aspects regarding the product delivery construct, all the other influencers were identified previously on the literature review and then could be operationalized from scales already validated (presented on Table I). Concerning the new variable identified (product delivery) all items were proposed based on the interviews and then adapted into question form.

In this study, we decided for the exclusion of aspects suggested by the literature that were not confirmed in the qualitative stage, proposing nine different constructs that have influenced consumers' participation in social commerce, which are: reputation, price, trust, information quality, perceived ease of use, perceived usefulness, transaction safety, social commerce components and product delivery.

First, we translated the items adapted from the other studies from English to Portuguese and then we re-translated to Portuguese (a back translation process). The differences found between the two versions were discussed to minimize any possible inconsistency due to its meaning, being after evaluated by three experts. As the cost of the product certainly influences the purchasing decision of the consumers (Churchill and Peter, 2000) and we did not use a parameter of price comparison with other websites, we decided to use the construct price only comparing it with a higher or lower use of comments, ratings and recommendations on the shopping decision of a certain product.

We operationalized the items referred to the purchasing process or product searching on the internet using a five-point Likert scale ranging from "strongly disagree" (1) to "strongly agree" (5). The same scale was used to evaluate consumer's participation in social commerce, regarding his/her intention to buy on the website, to recommend the website and to keep using the website. We added ten questions related to the profile of the respondent (such as gender, age, schooling, marital status, place of living, family income, social networks that uses, frequency of use, purchasing product category and frequency of shopping on internet) and three more questions related to the product searched and/or bought (type of product – for later categorization – the average price of the product searched/bought and, finally, if the product was bought or just searched).

Constructs	Loadings
Reputation – Kim and Park (2013); α = 0.84	
1. This s-commerce firm is well known	0.816
10. This s-commerce firm has a good reputation	0.848
19. This s-commerce firm has the reputation for being honest	0.820
27. I am familiar with the name of this s-commerce firm	0.816
Information quality – Kim and Park (2013); α = 0.82	
3. This s-commerce firm provides accurate information about the item that you want to purchase	0.736
12. Overall, I think this s-commerce firm provides useful information	0.830
20. This s-commerce firm provides reliable information	0.822
29. This s-commerce firm site provides sufficient information when I try to make a transaction	0.822
Trust – Kim and Park (2013); α = 0.81	
2. This s-commerce firm is trustworthy	0.800
28. I believe in this s-commerce firm	0.887
33. This s-commerce firm wants to be known as a company that keeps its promises and commitments	0.856
11. This s-commerce firm, despite having its own interests, takes into consideration what is best for me too (excluded)	
Social commerce components – adapted from Hajli (2013); α = 0.81	
9. I use online forums and online communities for acquiring information about a product	0.811
18. I usually use people rating and reviews about products on the internet	0.849
26. I usually use people's recommendations to buy a product on the internet	0.888
Perceived ease of use – Gefen et al. (2003); α = 0.76	
6. Learning to operate the websites on the internet is easy	0.833
15. My interaction with the websites on the internet is clear and understandable	0.852
23. It is easy to become skillful at using the websites	0.766
Product delivery – research authors; α = 0.73	
8. The delivery time defined by the site is attractive	0.846
25. The shipping (when) charged by the delivery of the product is fair	0.699
32. The means of delivery of the product is satisfying	0.873
Transaction safety – Kim and Park (2013); α = 0.74	
4. This s-commerce site implements security measures to protect its online shoppers	0.757
13. This s-commerce site has the ability to verify online shoppers' identify for security purposes	0.709
21. This s-commerce site usually ensures that transaction-related information is protected from being accidentally altered or destroyed during transmission over the internet	0.744
30. I feel secure about the electronic payment system of this s-commerce website	0.769
Perceived usefulness – Hajli (2012); α = 0.68	
7. Searching and shopping in this website is useful for me	0.836
16. Searching and buy in this website makes my life easier	0.722
24. This website enables me to search and buy products faster	0.794

Source: Research data

Table I. Exploratory factor analysis and Cronbach's α

After the data collecting instrument was previously determined, we conducted a pre-test with six members of our research group focusing on identifying possible formatting problems and/or understanding of the questions on the questionnaire. Furthermore, we made some adjustments on the instrument, and sent messages through the social media platform Facebook inviting different members of the net (from the circle of friends and acquaintances of the researchers) to participate of a study on electronic commerce and social networks requesting them to access the questionnaire through a link and, if possible, to share the invitation with their friendship network. We defined as inclusion criteria that participants should be over 18 years old and have searched or purchased a product on the

internet in the last three months. The sample is classified as non-probabilistic, being the respondents selected by convenience – all members of the social network Facebook.

Following data collecting procedures, we proceeded to the validation of the scales used. Even almost all of them had been validated in previous studies, the fact of being applied in another research context, place or population demands some care and specific validation procedures. To do so, we ran the exploratory factor analysis for each scale individually, freeing the number of extracted factors. The analysis confirmed the unidimensionality of the constructs proposed on the study, once the factor loadings grouped to a single factor. It is important to mention that all constructs are considered as first-order constructs and, not necessarily, present a strong association among them, what justifies why we did not run the factor analysis between blocks – the one in which all items of the instrument are included, aiming to discriminate the factors according to a higher or lower association. We used Cronbach's α coefficients to evaluate the reliability of the scales, which scores ranged from 0.68 to 0.84 suggesting a good internal consistence of the scales for exploratory studies (Hair *et al.*, 2005). Next, we present the results of the exploratory factor analysis and Cronbach's α for each construct (Table I). We used the statistical package SPSS for Windows 20.0 to perform the validation stages and data analysis, which are presented and discussed in the following section. To evaluate the participation in s-commerce, we used three different measures: purchase intention, recommending intention and continuance intention, being used for each one of these variables three different questions, shown at the end of the instrument (Table AI).

Results

First, we highlight the main characteristics of the 224 participants of the study. Concerning gender, 115 (51.3 percent) are men and 109 (48.7 percent) are women. The predominant age range is concentrated between 21 and 30 years (34 percent) and between 31 and 40 years (40.7 percent). As to marital status, single (48 percent) and married (45 percent) represent the majority of the sample. The predominant family income range concentrates between 4 and 8 minimum salaries (16.1 percent), 8 and 20 minimum salaries (39.3 percent) and more than 20 minimum salaries (37.5 percent). In relation to schooling, 25.9 percent have completed superior education and 46.4 percent post-graduation.

Besides these characteristics, we included some questions related to the habits of use and perceptions in relation to the internet and social networks. The majority of the respondents (86.6 percent) accesses SNS more than once a day, taking as a preference the Facebook (99.1 percent) and WhatsApp (93.8 percent). Another relevant information is the high percentage (46.9 percent) of the respondents that make at least one purchase a month on internet, being electronics (77.2 percent), books and magazines (63.3 percent) and products related to travel and tourism (62.9 percent) the main categories of products purchased or searched on the internet. Fashion articles and accessories (23.7 percent), electronics (17.4 percent), books and magazines (12.1 percent) and household appliances (10.7 percent) were the main chosen products evaluated in this research by the respondents – on the other hand, travel and tourism products (5.8 percent), health and beauty (6.7 percent) and domestic utility (7.6 percent) were the least chosen products evaluated by the respondents. In relation to price, 34.8 percent of the evaluated products cost between R$100.01 and R$300.00 and 29 percent cost more than R$700.01. The great majority (94.2 percent) of the respondents bought the evaluated products, while 5.8 percent only searched the product, but did not buy it.

We used descriptive analysis to evaluate the consumers' experience with the websites where they performed the purchase or search of their products (Table II). First, we identified reputation (4.46) and perceived usefulness (4.39) of the website as the best evaluated factors by the respondents (4.46). They realize that most companies evaluated are well known among them, being familiar with the firm's names and images. Previous studies

Constructs	*n*	Mean	SD
Reputation	*224*	*4.46*	*0.66*
27. I am familiar with the name of this s-commerce firm	221	4.52	0.81
10. This s-commerce firm has a good reputation	223	4.44	0.76
19. This s-commerce firm has the reputation for being honest	224	4.43	0.74
1. This s-commerce firm is well known	224	4.43	0.93
Perceived usefulness	*224*	*4.39*	*0.64*
24. This website enables me to search and buy products faster	222	4.47	0.74
7. Searching and shopping in this website is useful for me	220	4.46	0.77
16. Searching and buy in this website makes my life easier	221	4.24	0.91
Perceived ease of use	*224*	*4.38*	*0.65*
6. Learning to operate the websites on the internet is easy	223	4.51	0.75
23. It is easy to become skillful at using the websites	223	4.35	0.79
15. My interaction with the websites on the internet is clear and understandable	224	4.28	0.85
Information quality	*224*	*4.35*	*0.62*
3. This s-commerce firm provides accurate information about on the item that you want to purchase	221	4.49	0.71
20. This s-commerce firm provides reliable information	221	4.35	0.80
29. This s-commerce firm site provides sufficient information when I try to make a transaction	223	4.33	0.75
12. Overall, I think this s-commerce firm provides useful information	222	4.19	0.85
Trust	*224*	*4.34*	*0.67*
2. This s-commerce firm is trustworthy	223	4.50	0.72
28. I believe in this s-commerce firm	222	4.26	0.87
33. This s-commerce firm wants to be known as a company that keeps its promises and commitments	223	4.26	0.80
Product delivery	*224*	*4.06*	*0.83*
32. The means of delivery of the product is satisfying	223	4.23	0.90
8. The delivery time defined by the site is attractive	222	4.02	1.10
25. The shipping (when) charged by the delivery of the product is fair	223	3.94	1.12
Transaction safety	*224*	*4.06*	*0.72*
4. This s-commerce site implements security measures to protect its online shoppers	222	4.32	0.88
30. I feel secure about the electronic payment system of this s-commerce website	224	4.32	0.85
21. This s-commerce site usually ensures that transaction-related information is protected from being accidentally altered or destroyed during transmission over the internet	224	3.82	1.01
13. This s-commerce site has the ability to verify online shoppers' identify for security purposes	221	3.76	1.03
Social commerce components	*224*	*3.14*	*1.32*
18. I usually use people rating and reviews about products on the internet	224	3.41	1.50
26. I usually use people's recommendations to buy a product on the internet	224	3.15	1.54
9. I use online forums and online communities for acquiring information about a product	223	2.85	1.60

Table II.
Descriptive analysis

Source: Research data

have suggested that a good reputation has a positive effect on the relationship between an e-commerce company and consumers, becoming a key element (Jarvenpaa *et al.*, 2000). Accordingly, Doney and Cannon (1997) suggest that size and reputation influence consumers' trust in the company.

Regarding perceived usefulness, respondents said that the search or purchase realized on the website has been done in a fast way, with agility, making the people's life easier. We still found perceived ease of use of the site (4.38) as another point well evaluated by the respondents. These considered the use of the websites visited as quite easy, although the website interaction could be improved. Gefen *et al.* (2003) mentioned that when electronic sellers configure the websites to be easy to use and browse, they are building a relationship with the clients.

Factors such as information quality (4.35) and trust (4.34) were also highlighted as characteristics of the social commerce well evaluated by the consumers. According to

Delone and Mclean (2004), information quality is associated with the informative content of the website that, besides its relevance to e-commerce, also plays a critical role on the consumers' adoption to the social commerce. Jaiswal *et al.* (2010) suggested the quality of the information is a key characteristic that influences the satisfaction of users and the loyalty to e-commerce. Gefen *et al.* (2003) claimed that the client's trust is the main reason for the return of the consumers to an online store. Pavlou (2003) found that trust has a direct effect on the online purchase intention and risk reduction on e-commerce websites, putting trust as an elementary aspect in the adoption of the social commerce. Similarly, Chang and Chen (2008) claimed that trust in any kind of e-commerce, including s-commerce, can facilitate the interaction between seller and buyer, providing opportunities to the online companies achieve their objectives.

Factors such as product delivery (4.06) and transaction safety (4.06) appear with less positive evaluations, once they were well evaluated too. The question involving the means of delivery of the product was identified as a strong feature of the online companies researched, while delivery time and cost of shipping should receive more attention by the online sellers. Usually, the payment and the shipping of a product bought on the internet do not happen simultaneously; becoming more usual when the buyer pays for the product or service in advance but receiving it later, without being able to evaluate it before that (Standifird, 2001) – this segregation between payment and delivery can increase buyer's uncertainty concerning the online shopping. Thus, when we talk about delivery capacity, it is important to emphasize that this is not only related to delivery time, but also to the product delivered. If a received product is not the expected one or if it arrives damaged, consumers expect to be easy and quick to exchange the desired product.

Regarding the transaction safety, we identified that the evaluated websites present different measures to protect their consumers, especially in relation to the electronic payment system. When the consumer chooses a desired product, he/she hopes to end the payment in a fast and safe manner, receiving the product within the scheduled time. These results are consistent with the findings of previous studies by including safety in the electronic transactions as an important component influencing the trust of consumers in social commerce (Kim and Park, 2013).

The social commerce components factor (3.14) presented the lowest evaluation by the respondents when compared to the others. We note that comments, sharing, ratings and opinions coming from other people on the internet were used moderately. Comments and opinions, specially, were accessed more frequently; however, online forums and communities still present a low degree of participation. Online communities, for example, have a great opportunity in the social context for the people to share information and knowledge (Chen *et al.*, 2011). In this sense, they can be used as a source of know-how, where users interact in social commerce platforms in an online collaborative environment (Curty and Zhang, 2011). People ratings are another component of social commerce able to provide valuable information to the consumers; similarly, people's comments and opinions have the potential to reduce the uncertainty and increase the consumer's trust (Nambisan, 2002).

Aiming at analyzing the influence of these different factors on the participation in social commerce, we defined as dependent variables: purchase intention, recommending intention and continuance intention of using the website. Each of these measures was analyzed individually through a regression model, verifying the effects of the identified factors on the research (independent variables) in the consumers' participation in social commerce. We still used a general measure, calculated by joining the three previous constructs in a global factor (Table III). The regression analysis measured indirectly the influence of the independent variables on the consumers' participation in social commerce, enabling to visualize those factors that most strengthen the purchase intention, recommending intention

Variables	Model 1 Purchase intention		Model 2 Recommendation intention		Model 3 Continuance intention		Model 4 Participation in s-commerce	
	b	*p*	*b*	*p*	*b*	*p*	*b*	*p*
1. Reputation	−0.04	0.14	*−0.15*	*0.05*	0.00	0.96	−0.05	0.51
2. Trust	*0.29*	*0.00*	*0.39*	*0.00*	*0.33*	*0.00*	*0.35*	*0.00*
3. Perceived ease of use	0.06	0.43	0.14	0.21	0.08	0.35	0.12	0.13
4. Information quality	*0.19*	*0.03*	*0.20*	*0.02*	*0.22*	*0.02*	*0.24*	*0.01*
5. Product delivery	0.02	0.63	0.07	0.26	−0.01	0.87	0.02	0.76
6. Social commerce components	−0.06	0.54	−0.21	0.67	−0.04	0.48	−0.03	0.50
7. Transaction safety	0.07	0.34	0.03	0.61	0.03	0.69	0.02	0.79
8. Perceived usefulness	*0.22*	*0.00*	*0.11*	*0.14*	*0.16*	*0.04*	*0.16*	*0.02*
Adjusted R^2	46.8%		51.0%		47.4%		53.9%	

Table III.
Regression models

Source: Research data

and continuance intention. We verified the unidimensionality and the reliability of each dependent variable, which presented satisfactory values (Table AI).

We identified in all four regression models that variables such as trust, perceived usefulness and information quality appeared as the main predictors of the consumers' participation in social commerce – being trust the main one. According to Kim and Park (2013), social commerce focuses not only on selling products and services but also in creating trust among its users, which can induce purchase and recommendation intentions, thus generating more sales. The same authors claim that trust is positively related to purchase intention. In this sense, information from the social networks can compensate the uncertainty that online shopping causes, increasing the consumer's trust on the purchase. Besides, Chang and Chen (2008) showed that a lack of trust can be an often barrier to the consumers purchase on websites, until they acquire necessary knowledge to develop enough trust to recommend or buy in this website.

In relation to perceived usefulness, Friedrich (2016) points out in his literature review about social commerce that the website usefulness has an important role in the adoption of the social commerce by consumers, reflecting on the purchase intention and use of the website. Hajli (2013) suggests that the perceived usefulness has influence as much on consumers' trust in s-commerce as on consumer's purchasing intentions.

Regarding the information quality, consumers are more likely to trust more in social commerce firms that provide accurate, useful, reliable and sufficient information on products and services (Hong and Yang, 2009). In this way, online buyers depend on information provided to them by the website, once they have limited sources of information about products and services (Kim *et al.*, 2008).

The regression models presented a moderate explanatory power, whereof the adjusted coefficient of determination ranged between 46.8 and 53.9 percent. Interestingly, we verified that the reputation of the company influences negatively the website's recommending intention, suggesting the higher the reputation, the smaller the intention of recommending it – perhaps because consumers understand that the firm is known, they do not see new benefits to indicate it to other consumers. Grund and Gürtler (2008) claim that the recommendation system works as an important instrument to build the seller's reputation, aiming to reduce the consumers' perception of uncertainty about the products. A company with a good reputation or image enjoys a higher number of clients (Doney and Cannon, 1997; Jarvenpaa *et al.*, 2000).

Surprisingly, we did not find a significant association between social commerce components and the participation of consumers in social commerce, whereas previous studies suggested that consumers are more likely to giving more value to others'

information and opinions than traditional advertising when purchasing products or services (Kim and Park, 2013). Online recommendations can influence more the consumer behavior than actions controlled by the companies, establishing more credibility and trust (Ha, 2004). In Zhang *et al.*'s (2010) study, for example, online opinions given by consumers about a restaurant increased significantly its popularity. Even though, in our study, it was not found any significant association with this construct.

An explanation for the s-commerce components that do not appear as an influence factor in consumers' participation in social commerce can be associated with the "social fatigue." Some recent studies (Bright *et al.*, 2015; Lee *et al.*, 2016) have suggested that users can be tired of searching or pronouncing themselves in the social networks, because of the superficiality of the comments posted by other users, the amount of information (some already available and new ones that come up every minute) or to avoid the social exposure, avoiding their contacts to know about their lives. The generalized use of the social networks produces a perpetual obsession and creates expectations that people are forced to answer to the publication of the others in a short period of time. Aiming to attend these expectations, individuals need to pay continuous attention to the social networks, being exposed to a great volume of social demand (Lee *et al.*, 2016), increasing in a considerable way its use (Bright *et al.*, 2015), which causes the "social fatigue."

In order to verify if different characteristics related to the profile of the respondent or type of product bought or searched could be associated with a higher use of the social commerce components such as ratings, recommendations and online forums by consumers, we proposed two distinct analyses: first, we separated the respondents into two groups, one using intensively the components of the social commerce (which construct averaged above 3.0) and the other presenting low use (which construct averaged under 3.0); and second, we compared the social commerce components' intensity of use to the profile of the consumers and kind of products bought or searched.

Table IV highlights the comparison between consumers with high use of social commerce components and those with low use. For such, we realized Student's *t* test, which identified higher mean scores (at the 5 percent level) on the consumers' evaluations who used more intensively the social commerce components, especially on product delivery and transaction safety. These findings suggest that the use of online comments and ratings, as well as the participation in forums and communities, increases the perception of the consumer toward the safety of the transactions made electronically and the delivery conditions of the product. De Valck (2005) suggests that consumers, in general, give importance to the others' opinion; besides, they use these recommendations as the sole source or predominant source of information before the purchase, what can minimize their doubts about the integrity, quality and trust on the online seller. The online environment still generates much doubt on consumers; raising the recommendation systems as a method

Constructs	High use of s-commerce components ($n = 115$)	Low use of s-commerce components ($n = 109$)	p	Difference
1. Reputation	4.53	4.38	0.09	0.15
2. Trust	4.40	4.27	0.15	0.13
3. Perceived ease of use	4.42	4.33	0.32	0.09
4. Information quality	4.39	4.30	0.28	0.09
5. Product delivery	*4.19*	*3.93*	*0.02*	0.26
6. Transaction safety	*4.20*	*3.91*	*0.00*	0.29
7. Perceived usefulness	4.45	4.32	0.13	0.13

Source: Research data

Table IV. Comparison between consumers with high and low use of social commerce components

that have been used as a way to decrease this uncertainty, providing additional information related to comments and experiences about products searched or sold.

As a complement of this analysis, we identified on the qualitative stage of the research that consumers search for comments and complaints before the purchase decision. In cases where firms and/or websites appear associated with bad comments or have complaints spread over the internet, either related to purchase safety, shipping costs and manner/time of delivery, the consumer can be influenced on the decision to buy or not certain product.

Regarding the second analysis, we used the one-way ANOVA followed by Duncan's *post hoc* test, when founding a difference at the 5 percent level of significance. We did not find statistical differences in relation to social commerce components' intensity of use for gender ($p = 0.46$), age ($p = 0.17$), schooling ($p = 0.28$), income ($p = 0.07$) and frequency of shopping on internet ($p = 0.43$). However, when analyzing the price range of the products bought or searched besides the kind of products, we identified that more expensive products presented higher average use of recommendations, ratings and comments than cheaper products ($p < 0.000$) – Table V. Similarly, we identified that searches and purchases involving computer products and electronics ($p < 0.000$) also used more social commerce components than products like household appliances, health and beauty, as well as books, airline tickets, fashion and domestic utilities. Churchill and Peter (2000) claim that on the purchase of high cost products, consumers tend to evaluate if the chosen alternative was really the best, generating a perception of greater risk involved. So, there is more rationality in the process of purchase decision in this kind of product when compared to another product of lower monetary value.

Due to the inherent nature of the risks associated with online shopping, clients are attracted by lower prices as an effort to avoid risks. Chen and Dubinsky (2003) demonstrated in their study that low prices decrease this perception – being both the risk of quality or financial – showing a positive association between price and risk perception. According to Lee and Lee (2011), when goods or services are offered at a high discount rate or lower price, the risk is lower, so the consumer tends to buy the product with no necessity of searching for rating and comments. Somewhat consistent with our findings, Soares *et al.* (2015) also confirmed a moderation effect between product or service price with recommendations

Group	*n*	S-commerce components' intensity of use	
		Mean	Test Duncan
Price range			
Less than R$50.00	10	2.47	Subgroup 1
Between R$50.01 and 100.00	39	2.82	Subgroup 2
Between 100.01 and 300.00	78	2.86	
Between R$300.01 and 700.00	32	3.38	Subgroup 3
More than R$700.01	65	3.64	
Class of products			
Books	27	2.34	Subgroup 1
Travel/Tourism	13	2.64	
Domestic utilities	17	2.71	
Fashion	53	2.83	
Others	15	3.22	Subgroup 2
Household appliances	24	3.29	
Health and beauty	16	3.33	
Electronics	39	3.70	Subgroup 3
Computers	20	4.19	

Source: Research data

Table V.
Comparison between products, price range and social commerce components' intensity of use

and consumers' intention of participation in social commerce, indicating that as higher the price the consumer expects to pay, the more he/she will take into account the presence of positive recommendations at the purchasing decision or recommending the website as well as if the product price was lower, the association between using recommendations and participating of the s-commerce will be lower.

Final remarks

In this study, we sought to analyze – from the perspective of the consumer – the main factors and characteristics (personal or related to products purchased or searched on internet) that influence consumers to participate in social commerce. In this sense, we analyzed the influence of eight different factors on consumers' participation in social commerce: reputation, trust, information quality, perceived ease of use, perceived usefulness, transaction safety, social commerce components and product delivery. In addition, we analyzed the association between consumer's profiles and characteristics of the products searched or purchased with a higher or lower use of comments and ratings online, as well as participation in forums and communities.

We verified that a high percentage (46.9 percent) of the respondents made at least one monthly purchase on internet, being electronics (77 percent), travel and tourism (62.9 percent) and books and magazines (63.3 percent) the main categories of products purchased or searched on internet. We identified trust, perceived usefulness and information quality as the factors that most influence consumer participation in social commerce, being trust in the website the main predictor. Therefore, we conclude that the more reliable, useful, with relevant and accurate information the website is, the greater the participation of the consumers in social commerce, both in terms of purchase intention, recommending or returning to the website.

Regarding the different characteristics related to the respondent and the kind of products purchased or searched associated with a greater use of online ratings, recommendations and forums by the consumers, we found that consumers who make use of these resources perceive greater security in the transactions made electronically and better delivery conditions of the product. We did not find significant differences in the intensity of use of social commerce components in relation to gender, age, schooling, income and frequency of shopping on internet. However, when we analyzed the price range of the products purchased or searched as well as the kind of products, we identified that more expensive products have higher average use of recommendations, ratings and comments than products with lower price, even researching and purchasing computer products and electronics also seem to use social commerce components more intensively than search for products such as books, airline tickets, fashion and household appliances.

As limitations of the study, we highlight the small number of interviews conducted during the qualitative stage, which may have left out other relevant factors of the analysis on consumers' participation in social commerce. Another limitation refers to the selection of the participants of the study; all members of the social network Facebook are identified by the contact net of the authors – though it has been tried to enlarge this contact list by requesting the respondents to share the questionnaire link with their acquaintances, we should be cautious about the generalization of the results.

As contributions of the research, we can mention the proposition of an instrument to identify factors and characteristics that are taken into consideration by the consumers when participating in social commerce. Such a tool can be replicated by firms included in this type of commerce, in order to evaluate the behavior and perception of their customers about their performance in the online environment. We also highlight trust, information quality and perceived usefulness of the website as the most influencing factors of the consumers' participation in social commerce. In addition, more expensive products and products

classified as computers and electronics seem to use more intensively ratings, recommendations and comments online provided by other people. This fact supports the research literature that (positive or negative) online recommendations influence the consumers purchase behavior, reducing uncertainties about the products and increasing credibility and trust. On the other hand, fashion products, books, travel and household appliances seem to use less online reviews and ratings when consumers are deciding to buy or not such products. Finally, future research could: analyze the main determinants of the consumers' purchasing intentions in social commerce, identify the reasons that lead users to search certain products on internet, without, however, making the purchase and deepen the studies on "social fatigue," such as identifying the reasons that have caused certain consumers to decrease their participation or even abandoning social media.

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Appendix

Table AI. Questionnaire items used to measure consumers' participation in social commerce

Participation in s-commerce	*n*	Mean	SD
Purchase intention; $\alpha = 0.87$	*224*	*4.50*	*0.78*
01. I am likely to purchase products/services in this s-commerce site	223	4.50	0.82
07. Given the opportunity, I intend to purchase products on this s-commerce site	222	4.50	0.80
04. It is likely that I will purchase products on this s-commerce site in the near future	220	4.16	1.03
Recommending intention; $\alpha = 0.89$	*224*	*4.46*	*0.75*
05. I would provide others with information on this s-commerce firm	222	4.50	0.81
02. I would tell others positive things about this s-commerce firm	222	4.49	0.79
08. I am like to recommend this s-commerce firm to my friends and acquaintances	223	4.39	0.87
Continuance intention; $\alpha = 0.93$	*224*	*4.50*	*0.77*
03. I intend to return to this s-commerce site in the future	223	4.56	0.76
06. I intend to keep using this s-commerce site	223	4.50	0.81
09. I intend to look for information in this site again	224	4.46	0.87

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