The Influence of Customer Participation and Convenience on Customer Satisfaction: A multiple mediation

Abstract of "Trilha Acadêmica 2 - Comportamento do Consumidor": The purpose of this paper is to present a model that connects predictors of customer satisfaction considering Service Domain-Logic assumption and convenience and quality of service as sources that were identified as relevant aspects for customer satisfaction related to financial services. Based on a field survey of a sample of six hundred and eight respondents was obtained, which enabled the measurement of the researched variables using existing scales of satisfaction in financial services. The participants were undergraduate students from five different universities. Who considered their main provider of banking services to answer the survey questions? Structural equation modeling was used for data analysis to test research hypotheses. The predictive effects of convenience, economic value, and quality of service have proved to be significant for customer satisfaction. Perceived service quality was identified as a mediator of the relationship between convenience and customer satisfaction.
Keywords: Customer satisfaction, Customer participation, Economic value, Convenience, Perceived service quality.

1 Introduction

Recent discussions have showed inconsistencies on studies that describe how the relationship are between consumer participation during the use of a service with other variables. Customer satisfaction is one of the main variables, as well as their participation. For instance, Kellogg, Youngdahl and Bowen (1997), Chan *et al* (2010), Cermark, File and Prince (1994), disclose that customers tend to be more satisfied with a service when they participate in its execution. However, the empiric results from Bloemer et al. (2002), Worthington and Durkin (2012) and Luo, Wong, King, Liu, and Huang (2019) show that active customer participation can be related to dissatisfaction. As customer satisfaction is primordial, there are many studies seeking to understand how customer participation can influence their satisfaction (Chan, Yim, & Lam, 2010). Hsieh and Chang (2004) suggest consumer participation behaviors can positively affect consumer satisfaction depending on their economic needs. Ennew and Binks (1999) state that customer participation includes sharing information, responsible behavior, and an obligation to fulfill the responsibilities in the relationship and personal interaction. Responsible behavior in this case means that customers might need to take on duties and responsibilities in possible faults during the process. These inconsistencies open a gap for further investigation about the correlation between customer participation and satisfaction.

On the other hand, the definition of convenience for customers can be defined as anything that helps them to reduce their time and effort during the purchase process, like store accessibility and facilities, operating hours, payment conditions and seller's knowhow.(Berry, Seiders, & Grewal, 2002). Studies conducted by Khalid et al. (2011), Vinita and Sharma, (2015), Joshi and Joshi (2019) and Wang and Andres (2019) analyzed customers' behavior in banks located in Pakistan, India and USA respectively also identified convenience as an important index to obtain higher levels of perceived quality of customer satisfaction service. The main aspects related to convenience identified were facilities, decoration, staff kindness, convenient location of agencies, 24/7 ATM machines and parking. By understanding the needs of customers, organizations can create greater quality perception and higher levels of customer satisfaction (Rao & Sharma, 2010; Roy, Lassar, & Shekhar, 2016).

Considering the above ideas, the objective of this study is to answer the following question: How customer participation and the convenience provided influence in customer satisfaction in financial services? More specifically, this paper aims to understand how the customer participation influences their satisfaction by their perception of economic value; and how convenience changes the customer satisfaction through their perception of quality. Taking into account its objective, this paper is organized as follows: Firstly, a literature review of customer satisfaction. Then, it is purposed a multiple mediating model built through structural equations modeling technique to customer satisfaction. Afterwards the results will be presented and discussed, based on the analysis of data from a sample of 608 customers. This study will be concluded with a discussion of the results, its implications, limitations, and suggestion of future researches.

2 Academic background and research hypothesis

2.1 Satisfaction

Jamal and Naser (2002) define satisfaction as a feeling or behavior of a customer related to a specific product or service after their use experience. The customer satisfaction literature is based on Oliver (1981)'s theory that satisfaction level is related to the differences between real and expected performance for a specific service or product. The definition of satisfaction can also be measured by the customer experience with the service provider. In other words, satisfaction is an after-sales evaluation that compares the expected value in the pre-sales stage and the perceived value in the after-sales stage, after the purchase and the use of products or services. Among several studies, customer satisfaction represents an essential pillar in customer-directed practices by an infinity of companies that operate in many sectors. Customer satisfaction can also be considered one of the elements for success in the highly competitive globalized world of business, especially in financial services (Jamal & Naser, 2002; Vinita & Sharma, 2015; Ladeira et al. 2016; Ozkan et al., 2019).

2.2 Customer participation

The first studies about customer participation used the expression "involvement of customers in the execution of services," suggesting that customers not only act as customers, but also as financial co-producers or part-time employees in the companies (Lovelock and Young, 1979). Moreover, pioneering studies about customer participation (Chase, 1978; Levitt, 1972) raked services considering the level of customer interaction with the system, referring to the amount of period in which the customer interacts with the system in relation to the total needed for the service to be performed. Chase (1978) classifies the services as pure (high interaction), mixed (medium interaction) or almost no contact (manufacture). From this perspective, the author suggests that companies should decrease their interaction with customers to increase their productivity. Levitt (1972) also recommend the restriction of customer participation to avoid losses on their effectiveness. On the other hand, other authors suggest that customers can reassure the quality of the service when they interact with service providers. Ennew (1996) suggests that customer participation provides a more transparent comprehension about their needs to service providers, making them aware about service providers restrictions regarding what can or cannot be delivered during the service execution.

The customer participation concept used in this study is the same as Chan Yin and Lam (2010) used, defining customer participation as a behavioral construction, being a measurement for customers who give and share information, suggest and get evolved in the decision making during the service co-creation and the delivery process. The authors' findings reinforce an academic contribution proposed by the present study, which is to investigate the influence of the consumer participation in the perception of value and the customer satisfaction in financial services; therefore, it is expected that:

H1: The customer participation has a positive effect on their satisfaction with banking services provided.

H2: The customer participation has a positive effect on economic value perceived with banking services provided.

2.3 The relationship between economic value and customer satisfaction

Value is known as one of the most important elements in business success (Zeithaml, 1998), and although the value concept is well considered in the literature, there is a wide variety of perspectives. Some marketing researchers define value mainly as monetary (Parasuraman, 1997), while others make a more complex definition, which includes non-monetary benefits and sacrifices, like social relationships, of quality, knowledge, time spent, more competitively and skills (Wilson & Jantrania, 1994). Value concept is defined by Zeithaml (1988) as a result of the comprehensive evaluation of the perceived use of a product or service, based on the comparison between what is expected and what is received. That said, value can be defined as the relationship between perceived benefits and associated costs for receiving these benefits (Mcdougall & Levesque, 2000; Mulki & Jaramillo, 2011).

Value creation is a recurrent theme in academic papers, where connection reports between value creation and customer participation are identified (Prahalad & Ramaswamy, 2000; Chan, Yim, & Lam, 2010). The current view of concept based on the new logic of dominant service proposed by Vargo and Lusch (2004) reverberated in studies suggesting that companies can only exist if they have the ability to offer any value proposal to their customers.

The present study is based on the principle that economic value is created through customer participation in the best quality of service, personalized service, and more control of customer about the service process (Chan, Yim, & Lam, 2010). Besides that, organizations will be more successful in the market if they are able to offer more value to their customers than their competitors can offer (Junior & Miyake, 2011). The reward will be a higher quality relationship and satisfaction from their customers, and they can also get new ideas about products, process, innovations, incomes, and new market access from them (Walter, Ritter & Gemünden, 2001).

Customers can create more economic value through their participation with personalized services and more control. Customers with active evolvement in creating value can help ensure quality increase the likelihood reaching goals. This is based on the agency theory, where service customer monitors the fulfillment of service contract of providers (Mills, 1986). The empiric study made in the financial sector by Surprenant and Solomon (1987) suggests that service institutes compete in providing personalized services (more participation through sharing information and value creation). However, he reports that customers do not always want this kind of service at each meeting. This happens due to the lack of clarity of benefits to the customer and this may vary from the type of personalization, which brings costs both for the service provider and for the customer. Therefore, the added value should be evaluated with caution, and it is only between customer participation and satisfaction. This study results evidenced a positive relation between personalized services (value creation) and satisfaction.

Finally, according to the service-dominant logic, value can only be created and determined by the user, and the customer is always a value co-creator. Value is inherent to the use of product or services, such as perceived in the customer preferences and to calculation benefits (e.g., more personalized service), fewer costs (e.g., the effort expended), or to get involved in an exchange (Zeithaml, 1988). That said, finance institutions understand that the customer will be more satisfied if they create more value than their concurrence (Jiang, Xu, Cui, Zhang, & Yang, 2019). Besides that, in the financial segment, the results from Chan, Yin, and Lam (2010) show that the customer participation is meaningfully related to the economic creation of value and customer satisfaction, which means that economic value is a predictor of satisfaction. The relation between satisfaction and participation can be measured by economic value. Aligning these considerations, this study emphasizes the importance of economic the value in the satisfaction perception and participation of customers. Based on this, it is expected that:

H3: The perceived economic value has a positive effect on customer satisfaction in financial services.
H4: The perceived economic value mediates the relationship between customer participation and customer satisfaction in financial services.

2.4 The relationship between convenience and customer satisfaction

According to Brito, Vieira, and Espartel (2012), convenience is considered important in the service economy, and it is one of the tendencies and emergent subject in academic contributions about costumer behavior. Marketing studies about convenience created the concept of one only aspect time in economy regarding the purchase experience to a multidimensional construct. The initial concept of convenience refers to time and effort spent by consumers to acquire goods or services instead of a specific feature of a product or service (Chang, Yim, & Lam, 2012). Convenience can be defined as a second order construct consisting of five types of costs of time and effort evolved with experience of services (Berry, Seiders & Grewal 2002; Seiders et al., 2007).

Some of the financial services related to customer participation and convenience are the ATMs, accessibility to use tools like internet banking and phone banking. By understanding customer needs from financial services, better satisfaction levels to customers can be generated when thinking about these convenience resources (Rao & Sharma, 2010). The internet has a high potential for interactivity, including convenience, customization (Yoo, Lee and Park, 2010), and may influence positively the satisfaction of customers through this variable.

Besides affecting satisfaction, studies show that convenience affects the perception of quality of services (Berry; Seiders & Grewal, 2002; Kaura, 2013). It is possible to relate these results to the equity theory (Adams, 1965), known as the distributive justice, which relates the fair balance of inputs (like time and effort) and outputs as partners in an exchange. The perception of convenience by customers and their effects on the evaluation of service can be influenced by the amount of time spent and the cost of energy (Bitner, 1994). Time and effort are personal resources, which are spent by customers when they purchase or use a service (Berry, Seiders, & Grewal, 2002).

Therefore, perceptions of serviced convenience affect the global evaluation of consumer service, including service satisfaction and quality of service perception. There is a positive effect of service convenience in the perceived service quality (Thuy, 2011). That said, customer perception about quality service is not only based on what is offered to them, as the literature proposes (Parasuraman *et al.*, 1988; Cronin & Taylor, 1992). Customers also analyze how much energy and time they will spend (beyond money) to evaluate the quality of the service process. The convenience has a direct impact on the satisfaction through the mediator role of quality of service perceived (Thuy, 2011; Vinita & Sharma, 2015; Roy, Lassar, & Shekhar, 2016). Therefore, it is assumed that:

H5: The convenience in financial services has a positive effect on customer satisfaction in financial services.
H6: The convenience in financial services has a positive effect on service quality in financial services.

2.5 The relationship between service quality and customer satisfaction

Quality of service is defined by Bitner and Hubbert (1994) as the general customer impression about superiority or inferiority of a specific organization or service. Financial services that stand out in quality of service usually have marketing strategies with higher revenue and customer retention, which increases their participation in the market (Bowen and Hedges, 1993). There seems to be consensual among marketing researches that quality of service and customer satisfaction are separated constructs, but both share a close relationship (Bitner & Hubbert, 1994; Cronin & Taylor, 1992; Oliver, 1993a; Patterson & Johnson, 1993). As previously stated, satisfaction can be defined as a cognitive and affective reaction to a service incident (or sometimes, to a long-term relationship of service). Satisfaction or dissatisfaction are usually the result of the experience with quality of service being compared with what was expected (Oliver, 1981).

On the other hand, service quality is seen in the literature as a unique construction of customer satisfaction. Being thus, Parasuraman, Zeithaml, and Berry (1988) define service quality conceptually as a realistic construction that represents the excellence in customer service to the customer (Taylor & Cronin, 1994). Cronin and Taylor (1992) describe service quality as an attitude position, related, but not equivalent, to satisfaction, as this one derives from results of the comparison with expectations of performance (Bolton & Drew, 1991a; Parasuraman, Zeithaml, & Berry, 1988). A careful examination of this definition shows the ambiguity between definition and conceptualization of service quality.

Parasuraman, Zeithaml, and Berry (1985; 1988) argue that higher levels of service quality result in more consumer satisfaction. Hossain and Leo (2009) states that service quality has been increasingly recognized as a critical factor to the success of any business (Parasuraman et al., 1988), and in the banking sector, it is considered essential. The quality of service has been widely used as a metric to evaluate banking service performance. Financial business understand that customers are faithful if they receive higher service quality than competitors (Dawes & Swailes, 1999), and, additionally, banks can only obtain high profits if they are able to position themselves better than their competitors in a specific market (Davies et al., 1995). As a result, banks need to focus on quality of service as a central and competitive strategy (Chaoprasert & Elsey, 2004).

Previous studies related the importance of bank service quality in seeking customer satisfaction. Ladhari, Ladhari and Morales (2011) analyzed banking customers in Canada and Turkey and they found that despite the difference in quality perceptions, that occur due to the disparity in economy, society and cultural involvement that oscillate between countries (Malhotra, 2006), the service quality shows positive relationship with customer satisfaction. Hawary and Ward (2006) investigated the relationships among service quality in an Australian bank empirically and found positive evidence in the relation between both variables. The results from Amim and Isa (2008) research performed in Malaysian financial services context match with Hawary and Ward (2006) studies, because their main finding was that the establishment of higher levels of service quality might lead the customer to a higher level of satisfaction.

Levesque and McDougall (1996) consider service quality one of the main reasons for customer satisfaction and the intermediation for their future intentions with retail banking. Jamal and Naser (2002) report in their study that the customer satisfaction in financial services segment is based on central dimensions and relational service quality, what match with Lavesque and McDougall (1996) studies, who report the same dimensions of service quality considering them important conductors to determine customer satisfaction with the services provided by banking institutions. More recently, Vinita and Sharma (2015) confirmed the positive impact of service quality on the satisfaction of banking customers in India.

Therefore, it is assumed that:

H7. The perceived service quality has a positive effect on customer satisfaction in financial services.
H8. The perceived service quality mediates the relationship between convenience and customer satisfaction in financial services.

3 Research methodology

A survey was conducted in order to collect data on the hypothesis test. Several undergraduate students from different universities of the Southernmost state of Brazil were willing to respond a self-managed physical questionnaire. All the students participated in a draw of twenty-five cinema tickets. Anseel et al. (2010) states that the use of incentives in data collection usually make the respondents more interested in the survey. Thereby, the respondents were oriented to only use their own experiences with their main bank as a reference to answer the questions.

3.1 Measures

The measures used in this study were an adaptation of previously validated measures or were developed based on a literature review. The scales used in this study were the same as used in Chan, Yin and Lam (2010) studies, which already addressed the variables customer participation, satisfaction and economic value that are of interest of this study in the banking service context. Besides that, it was used Lassar et al. (2000) scales to measure the service quality, and Kaura (2013), to measure convenience. The scales were submitted to the reverse translation process (Dillon et al., 1994). The responses were analyzed by using the 7-point Likert Scale that range from (1) 'strongly disagree' to (7) 'strongly agree'.

3.2 Data analysis

Before doing data analysis, a univariate statistic was done using SPSS 23. An analyze of collinearity was made from measurement models of each construct to verify if the measures were not harmful to multicollinearity. After that, to test the model by structural equation modeling was made by SPSS AMOS 23. Therefore, it was observed an adherence from items to factor through the factor load values (λ) and the square of estimates (e.g., communalities, λ^2). The indicators that showed $\lambda < 0.70$ and $\lambda^2 < 0.50$ represented low capacity to measure the respective latent variable (Hair et al. 2009). From these estimates, composite reliability (CR) was calculated, and the average extracted variance (AVE) to test, respectively, the intern consistency and the convergent validity of the model. The discriminant validity was assessed by the criterion Fornell-Larcker (1981).

To test the hypotheses that predicted direct effect among variables, in what the regression importance (β), its significance (p) and the determination coefficient (R^2). In all CB-SEM procedures the model settings were considered: the reason between chi-square of model (χ^2) and the degrees of freedom (df); normed fit index (NFI); goodness-of-fit index (GFI); adjusted goodness-of-fit index (AGFI); root mean square error approximation (RMSEA); Comparative Fit Index (CFI). In the measurement model, also it was observing an adjustment from the standard deviation.

To test the mediating effect, it was made a three-way procedure suggested by Baron and Kenny (1986): first of all, the regression of the mediator variable in the independent variable; second a regression of independent variable in the dependent variable, and in the end, the mediator variable must affect the dependent variable (Hair, Black, Babin, Anderson, & Tatham, 2009; Baron & Kenny, 1986). The meaningfulness of the indirect effect was evaluated by Sobel (1982) procedure.

4 Results

From the final sample (N = 608), 314 (52%) of respondents were female. The mode for this age range was between 18 to 22 years old (37%); 73% have another profession beyond the academic activities; 79% were single. The mode of this annual income range was U$ 6,936.00 to U$29,880.00 (53%). The main banking services used for this sample were checking account and savings (47%), followed by the exclusive use of checking account (44%). About the time of account in the main bank, 30% have checking account for more de five years. So, only 12% of the sample does not use checking account service, and only 13% have the checking account for less than one year in the bank which they elected as their main financial services provider.

4.1 Measurement model

It started from collinearity analysis. It was identified that, in the first moment, the collinearity analysis seven presented variables with values of tolerance lower than 0.20 and VIF values higher than 5.0. Therefore, the 4 variables were eliminated, because they presented shallow values. After these adjust, it was not identified new cases of multicollinearity. After some item's elimination, it started the analysis in CB-SEM. It was decided that customer participation would be sufficiently considered in content value if measured only through its 2 observable variables. Thus, nine positive correlations were inserted between the same construct variable. The estimated of measurement model are presented in table 1.

Table 1 – Estimated of measurement model

Latent Variable	**Variable**	**Non-stand.** β	**Stand. Error**	*z-value*	λ	λ^2
Customer Participation	CP4	1.195	.126	9.459	.788	.621
	CP5	1.000	*	*	.822	.675
Customer satisfaction	CS6	1.000	*	*	.894	.799
	CS7	.954	.032	29.845	.858	.736
	CS8	1.006	.028	35.672	.937	.878
Economic Value	EV10	1.126	.043	25.961	.893	.798
	EV11	1.170	.043	26.941	.923	.852
	EV12	1.128	.042	27.070	.920	.847
	EV14	1.000	*	*	.795	.632
Service Quality						
SQT	SQT15	1.000	*	*	.892	.795
	SQT16	.972	.046	21.344	.884	.781
SQC	SQC19	1.000	*	*	.762	.581
	SQC20	1.163	.050	23.488	.860	.740
	SQC21	1.097	.049	22.533	.832	.692
	SQC22	1.041	.037	28.084	.820	.672
	SQC23	1.003	.047	21.453	.799	.638
SQR	SQR24	1.145	.050	22.759	.841	.707
	SQR25	1.167	.052	22.293	.828	.686
	SQR26	1.185	.049	24.086	.883	.780
	SQR27	1.106	.051	21.659	.809	.655
SQS	SQS28	1.099	.047	23.228	.857	.734
	SQS30	1.025	.050	20.433	.773	.597
	SQS31	.987	.045	21.828	.815	.664
SQE	SQE32	1.131	.050	22.751	.843	.711
	SQE34	1.081	.048	22.469	.835	.698
	SQE35	1.102	.049	22.538	.837	.701

	SQE36	1.069	.047	22.894	.849	.721
Convenience						
CD	CD37	1.000	*	*	.763	.582
	CD38	.957	.036	26.297	.712	.506
	CD39	1.042	.038	27.195	.787	.619
	CD40	1.143	.061	18.696	.714	.510
CA	CA41	1.215	.057	21.298	.803	.644
CT	CT46	1.043	.048	21.644	.813	.661
	CT47	1.085	.049	22.199	.830	.688
CB	CB48	1.027	.050	20.650	.786	.617
	CB49	1.043	.047	22.374	.838	.702
	CB50	1.001	.047	21.494	.808	.652
CPB	CPB51	4.571	1.561	72.203	.888	.652
	CPB52	1.125	.046	24.207	.890	.793
	CPB53	1.131	.047	23.983	.884	.782

Note: * standardized coefficient

The standard residues of the covariates of observable variables of models presented at Table 1 showed magnitudes less than |2.58|, which indicate that the specification of the model can be considered adequate (Hair et al., 2009). After adjustment of indicators, the measurement index presented adequate to acceptable standards (X^2/df = 2.664, GFI = .856, AGFI = .835, NFI = .926, CFI = .952, RMSEA = .052) for a reasonably good fit (Hair et al., 2009). Therefore, it was possible to compute the composite reliability, average variance extracted, which presented generally accepted standards, by Hair et al. (2009) and Marôco (2010). After obtained these indexes, it was made Formell and Larcker (1981) test to obtain the discriminated validity, see table 2.

Table 2 – Discriminant Validity – Fornell-Larcker's test

Variable	**CR**	**AVE**	**1**	**2**	**3**	**4**	**5**	**6**
1. Participation	.787	.648	**.804**					
2. Satisfaction	.925	.804	.102	**.896**				
3. Economic Value	.935	.782	.413	.433	**.884**			
4. Tangibles	.882	.789	.106	.524	.312	**.888**		
5. Relationship	.972	.686	.129	.729	.387	.638	**.828**	
6. Convenience	.956	.647	.185	.745	.448	.545	.853	**.804**

Note: Off-diagonal entries are correlations among constructs. On the diagonal is the square root of the AVEs.

Fornell and Larcker (1981) criterion, presented in table 2, identified that is a positive correlation between the construct convenience and the dimension relationship of the construct of second order service quality. Therefore, it was need the application of the Bagozzi and Phillips'test (1982), where it was used the values of fix chi-square (4508.276), and the free chi-square (1792.343) and the test resulted in p < .000 values, giving the evidence that can measure the constructs, even with high correlation, because the superposition is not affecting the estimative quality.

4.2 Structural Model

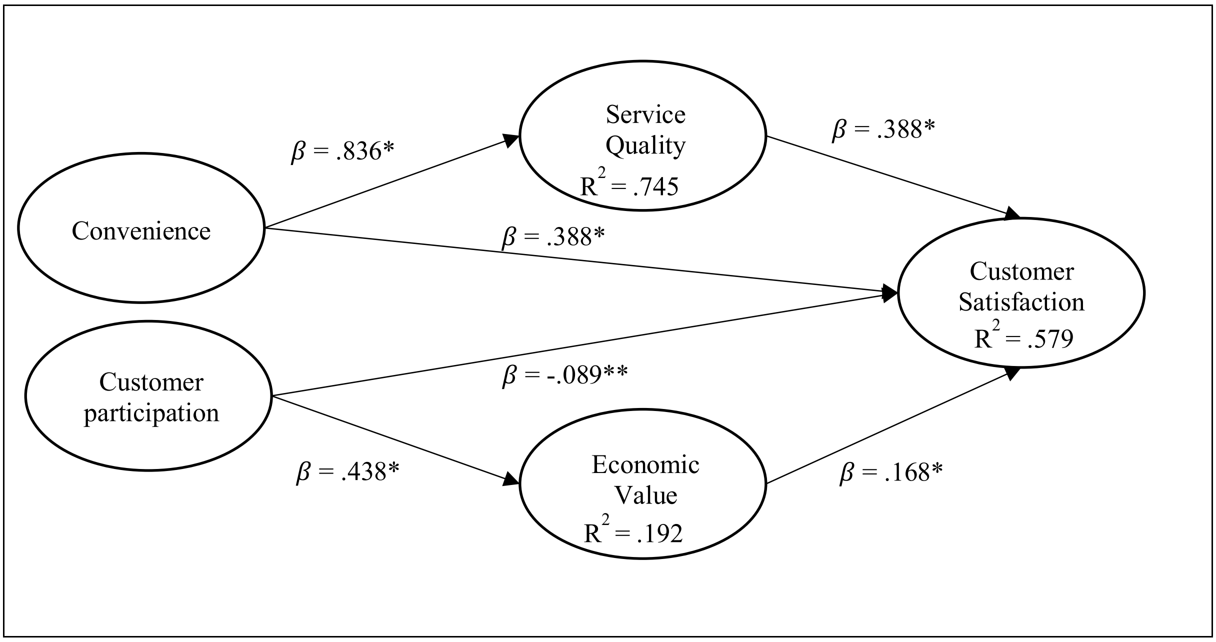
We test all the relationship between constructs and considered an acceptable standard of significance for being less than .050 (Hair et al., 2009). The first index analysis of adjusting presented the indicators NFI, GFI and AGFI out-of standard indices generically accepted.

Seeking an improvement in the structural model through adjusts nine positive correlations. All of those were suggested by software AMOS 19.0 and the variables are from the same construct. After all these adjustments, the model structural shows all the criteria of recommended level (X^2/df = 2.775, GFI = .850, AGFI = .829, NFI = .921, CFI = .948, RMSEA = .072) for a reasonably good fit (Hair et al., 2009; Marôco, 2010), Figure 1 shows the intensity of case/effect among model variables.

The hypothesis H1 was not supported (β = -.089) we found a negative effect between customer participation and customer satisfaction. It is perceived that customer participation is significantly related to economic value (β = .438), which confirmed the hypothesis H2. However, customer participation presented a negative correlation with satisfaction (β = -.089), and the economic value perception is also related to customer satisfaction (β = .168), and the hypothesis H3 was also supported.

The results indicate that convenience has significant effect on satisfaction (β = .388, p < .001), supporting H5 hypothesis. Besides that, convenience also has a significant standardized effect on service quality (β = .863, p < .001), which supports the H6 hypothesis. Likewise, service quality has a significant standard effect in satisfaction (β = .388, p < .001) supporting H7 hypothesis, see table 3.

Figure 1 – Intensity of cause and effect among the model variable



Notes: * p < .001., ** p < .05

Table 3 – Test results of direct hypothesis

Direct Relations Hypothesis				β	B	S.E.	z-value	*p*	Test
H1	Satisfaction	←	Customer participation	-.089	-.110	.520	-2.309	**	Rejected

Direct Relations Hypothesis				β	B	S.E.	z-value	*p*	Test
H2	Economic Value	←	Customer participation	.438	.621	.071	8.701	*	Accepted
H3	Satisfaction	←	Economic value	.168	.160	.036	4.465	*	Accepted
H5	Satisfaction	←	Convenience	.388	.456	.100	4.575	*	Accepted
H6	Service quality	←	Convenience	.863	.599	.047	12.716	*	Accepted
H7	Satisfaction	←	Service quality	.388	.659	.142	4.628	*	Accepted

Notes: (*) significance level in $p < 0.001$; (**) significance level in $p = 0.05$ β stand. = beta standard; B = beta non standard SE = *standardized error*.

4.3 Mediation hypothesis test

According to Baron and Kenny (1986) suggestion, there were used three regressions to do the mediation test: first of the independent variables (convenience and customer participation) over mediators (service quality and economic value). Second: from independent variables (convenience and customer participation) over dependent variables. Third, the independent variables (convenience and customer participation) both for mediator variable (service quality and economic value) and dependent variable (satisfaction). The results obtained from these regressions are in table 4.

Table 4 – Mediation hypothesis test results

Direct relation hypothesis			β	B	S.E.	z-value	*p*	Test
H4 - 1st Regression	Econ. value	← Cust. particip.	.438	.623	.071	8.715	**	Accepted
H4 - 2nd Regression	Satisfac.	← Cust. particip.	-.019	-.033	.005	-.653	.514	Rejected
H4 - 3rd Regression	Satisfac.	← Cust. particip.	-.089	-.110	.520	-2.309	**	Accepted
H4 - 3rd Regression	Econ. value	← Cust. particip.	.438	.621	.071	8.701	**	Accepted
H4 - 3rd Regression	Satisfac.	← Econ. value	.168	.160	.036	4.465	**	Accepted
H8 - 1st Regression	Serv. quality	← Convenience	.853	.585	.048	12.250	**	Accepted
H8 - 2nd Regression	Satisfac.	← Convenience	.721	.853	.053	16.052	**	Accepted
H8 - 3rd Regression	Satisfac.	← Convenience	.388	.456	.100	4.575	**	Accepted
H8 - 3rd Regression	Serv. quality	← Convenience	.863	.599	.047	12.716	**	Accepted
H8 - 3rd Regression	Satisfac.	← Service quality	.388	.659	.142	4.628	**	Accepted

Notes: (**) significance level in $p = 0.05$; β stand.= Beta standardized; SE = *standardized error*.

In the H4 test, the independent variable (customer participation) affected the mediator variable (economic value) in the first regression ($\beta = .438$, $p < .001$). Second, the independent variable effect did not present significance on the dependent variable (β = -.019, p = .514). Third, the mediator variable affected the dependent variable in the third regression (β = .168, p < .001), it means that not all criteria of Baron and Kenny (1986) was met. Sobel's test presented that indirect effect (a x b), of .074, presented z = 3.721. It means significance in p < .050 level; therefore, the mediator effect exists, supporting H4, which establishes the mediation effect of economic value between customer participation and satisfaction. However, despite the existence of the mediating effect supporting H4, since the direct causal relationship was not evidenced, there is an inconsistent mediation (MacKinnon; Fairchild and Fritz, 2007), which matches to results from Rocha, Mota, and Matos (2011).

Finally, in H8 test, Sobel test showed that indirect effect (a x b), from .335, z = 2.702. So, it showed significance in p < .050. The mediator effect existed, supporting H8, which establishes the effect of partial measurement of service quality among the relation of convenience and satisfaction. It can also be stated that H8 was supported because of four other conditions imposed by Baron and Kenny (1986) to prove the mediator effect. First, the independent variable (convenience) affected mediator variable (service quality) in the first regression (β = .853, p < .001) in the second regression. Second, the independent variable affected dependent variable (β = .721, p < .001) in the second regression. Third, the mediator variable affected the dependent variable in the third regression (β = .388, p < .001). The last condition refers to the need of effect that the independent variable causes over the dependent variable to be smaller in the third regression than in the second one, what also happened (β = .388 < β = .853). However, as the independent variable effect was not null in the third regression (β = .388, p < .001), it is confirmed the partial mediation effect, because a total measurement occurs, when the insertion cancels the independent variable on the dependent.

5 Conclusion

Despite the growing number of discussions about customer participation in services, mainly about the contemporary market scenario, where the customer is seen as the main actor in the value creation process (Grönroos, 2008; Payne *et al.*, 2007; 2009; Prahalad & Ramaswamy, 2002; 2004 Vargo & Lush, 2004; 2008; Williams & Aitken, 2011), there is still not much information about the effects that the shared value creation between consumer and organizations cause in customer perceptions about the service provided. Expanding the scope to financial services segment, the lack of this knowledge is even more significant (Chan et al., 2010).

Considering findings and weights from searches cited in this study, it was proposed a theoretical model in which relations between customer satisfaction, customer participation, and economic value, considering the investigated constructs as an important background of customer satisfaction in financial services were established. In its theory, the constructed model presupposes relations based on empiric evidence and some theories, as the role theory and the disconfirmation theory. The model relations suppose that the customer participation through sharing information, and more economic value perception are independent variables and predictor of the customer satisfaction dependent variable in financial services. Therefore, the results from second hypothesis match with the results from Surprenant and Solomon (1987), Zeithaml (1998), Oh (1999), Dawes and Swailes (1999), McDougall and Levesque (2000) and Bell and Eisingerich (2006), showing that economic value has the ability to influence satisfaction and to be the mediator variable in its relationship with customer satisfaction, agreeing with Chan, Yin, and Lam (2010) studies.

However, the unexpected results from the first hypothesis (H1) verified in this study were conflicting with studies of Chan, Yin and Lam (2010) as the negative way was presented in the relationship between customer and satisfaction (β = -.170, p = 0.002). This result contrasts with a set of evidences pointed out by studies which presuppose that greater customer participation may create higher levels of satisfaction (Auh et al., 2007; Bendapudi & Leone, 2003; Chan et al., 2010; Gallan et al., 2012). It shows a lack of congruence between findings and the theory of roles (Goffman, 1976), which reports the performance of the individual and their role (which happens because of their participation) influencing positively in their satisfaction. A possible explanation for this result may be related to the behavior setting theory (Garling, 1998), because each person is in a different self-regulating system with particular social rules, which are related to the social context where each one is. Therefore, each consumer assumes different responsibilities and activities, seeking for satisfying service. Thus, the non-confirmation of a positive relationship between customer participation and their satisfaction may be justified by the low average (1.49 to 1.63) presented in the observable variables of PC construct. This might mean that customers participated a little or did not participate during the utilization of bank services. Also, they may not believe that their participation was a necessary effort to make, as they could not see relevant benefits to justify their participation. These findings can be supported by some empiric studies which identified customer participation as not benefic in seeking for better satisfaction levels in bank services (Worthington and Durkin, 2012; Bloemer et al*.,* 2002). This study brings results that show that customer participation impacts positively on the perception of economic value, but it is not the key for customer satisfaction in financial services. This conclusion proves that the effects of customer participation are more complex than others before mentioned.

5.1 *Managerial implications*

These findings contribute managerially, since it agrees with other authors who see ungraduated students as potential customers to financial institutions, especially in emerging economies like Brazil, where retail financial institutions often create advertisements and marketing strategies focusing in this market segment. This is explained because ungraduated students are identified as a niche of the customer with strong potential of high incoming after graduation, comparing to those customers with lower education levels (Yao & Matthews, 2007), and they are considered to be a profitable market for financial institutions (Chigamba & Fatoki, 2011).

It is the manager's responsibility to seek for solutions to get efficient management of customers portfolio. This management should provide interaction through customer participation, which can provide more perception of economic value, and mainly, facilitate the sharing of information, so that the client perceives this interaction with the banking service as attractive and also, that can provide interesting benefits. Therefore, the customer may feel more motivated to promote this value co-creation and identify the best options to promote this interaction with other customers. These actions should prevent any negative perceptions of customer about their participation during the process of service providing and avoid that the customer sees their participation as a task, which only provides a way of shifting the workload from the bank to the client (Auh et al., 2007). This practice may become a strategy when seeking customer satisfaction. Briefly, proper communication programs should be designed and executed to make customers able to share information, and perceive in a positive and correct way the quality of service provide, as well as of economic value and specially their participation, which in fact was presented as the construct of conflict results to the other two studies related to its influence to customer satisfaction.

5.2 Future studies and limitations

Although the present study was constructed with scientific accuracy, it is suggested to replicate it in another context different than banking sector, but of similar nature (e.g., medical, statutory), to determine the generalization of results. Considering the composition of the sample, it was found a limitation in this study, even with the offered incentive to students willing to participate in the survey, and the fact they are a group who represents a market segment with extremely importance to financial institutions, this sample may have caused a number of bias in the results, because it was selected by convenience. It is important to emphasize the application of a theoretical model in different realities and samples because this practice can overcome this limitation. Then, this mode can get strength in the search for generalization of results in a context where there are significant cultural differences (Schumann et al., 2010). Therefore, these findings should be appreciated over the investigated sample, and the generalization of the results for different sample contexts can also be a limitation in this study.

Due to the conflicting results regarding the effect of customer participation on their satisfaction, the need of establishment of a more precise understanding of the phenomenon stands out. The investigation of customer participation is not recent, but the different results presented reinforce the need of new studies directed to this phenomenon. Longitudinal studies may help to clarify the impacts caused by customer participation, and this can be verified with the implementation of strategies that incentive customer participation during the service process. Additionally, it could be verified if the economic value perception would persist in the long term. The approach through a meta-analysis may also be suitable to establish a clearer comprehension of the effects of investigated variables from this study.

To conclude, future studies should verify possible moderating variables in the sample analysis, like the comparison of findings between customers from private and public banking institutions. It is possible that the inclusion of these moderating variables explains the non-confirmation of the hypothesis H1, in addition to complementing knowledge related to the investigated phenomenon.

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