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QUALITY OF TEACHING, CORPORATE IMAGE AND SATISFACTION OF STUDENTS ENROLLED IN THE NIGHT SESSION OF A BRAZILIAN PRIVATE UNIVERSITY: A STUDY WITH STRUCTURAL EQUATION MODELING

Abstract:

Since 2014, the Brazilian economy has undergone a process of recession followed by stagnation, with end still unknown. This poor economic performance has provoked an increase in the unemployment rate, causing lower demand in several markets, including education. In this recessive environment, competition in the learning industry has intensified, especially in the university segment. The corporate image and loyalty of students has become a priority to expand market share. This study investigates the effect of the quality of service of a Brazilian private university on student satisfaction, corporate image and loyalty. A total of 112 questionnaires were distributed to students from a renowned private university in the city of Rio de Janeiro and 98 were fully answered. Students were selected by convenience sampling. The data were analyzed through structural equation modeling, based on partial least squares. In line with the work that underpins this study, the quality of the learning service was considered an antecedent of student satisfaction, affecting the corporate image and loyalty. The results showed that general student satisfaction affects the corporate image and loyalty, but not all dimensions of service quality have this effect. Although the main findings show convergence with those obtained in the work that underlies this study, some relevant divergences deserve attention. The Brazilian students in our sample did not attribute high relevance to academic aspects, including excellence of the faculty, since the professor is considered the main barrier to reach the most critical goal for the night students of the Brazilian private university studied, namely a university diploma.

Keywords:

Service Quality; Corporate Image; Student Satisfaction; Loyalty; Structural Equation Modeling

JEL Classification: C39, C51, I29

1. Introduction

The recent recession followed by stagnation of the Brazilian economy was preceded by significant growth of household debt in the period between 2003 and 2014, largely due to inclusion of more low-income people in the credit market. A big increase of household debt, most likely driven by credit supply, was followed by a severe recession and then weak recovery (Garber et al., 2018).

This economic stagnation and higher household debt has had an adverse effect on the education market, sharpening competition, notably in the university segment (Silveira, 2018).

In this setting, the strengthening of the corporate image of universities and loyalty of their students is fundamental for expansion in the market.

Therefore, we conducted a study to evaluate the impact of the teaching service quality of a private Brazilian university on student satisfaction, corporate image and student loyalty.

To be competitive and thus succeed, universities need to identify and deliver what students consider to be most important. Their satisfaction has an impact on two fundamental constructs in a market economy: corporate image and student loyalty (Elliot, 2002).

The sharper the competition is, the greater the strategic importance will be of corporate image and student loyalty, because these will have a strong effect on the market share (Tong, Wong and Woo, 2016).

In this study, we used the model of Ali et al. (2016), which considers the constituent dimensions of service quality as antecedents of student satisfaction, which in turn affects corporate image and student loyalty.

2. Literature Review

This section discusses not only the grounds of each construct of the hypothetical model, but also evaluates the causal connections between the constructs, to enable establishing our hypotheses.

Service quality

Providing high-quality services is important to generate a competitive advantage for any organization. Service quality is a fundamental condition to achieve and maintain that competitive edge (Porter, 1981; Mintsberg, Ahlstraud & Lampel, 2010).

Offering good services increases customers' satisfaction and improves the company's position in the market, raising its profitability over the long run (Anderson, Fornell & Leihmann, 1994).

Quality can be defined as the set of characteristics of a product or service that is able to satisfy the specific needs of consumers, or the degree to which a product or service fulfills the needs or demands of consumers (Crosby, 1979). In turn, Juan (1988) defines service quality as the ability to satisfy consumers' expectations. Pinning down

a single definition of service quality is a difficult task, as is the establishment of a scale to measure it precisely (Zeithaml, 1981; Seth, Deshmukh & Vrat, 2005).

Some authors, such as Cronin Jr. and Taylor (1992), define the perceived quality of a service as a single dimension, consisting of customers' impression regarding the overall performance or excellence of the service of a determined provider, an approach dubbed Nordic by Chahal and Kumari (2010).

Among the works by scholars of the Nordic school is that of Grönroos (1984), who recognized that the quality of a service perceived by consumers is the result of a combination of technical and functional quality. He also postulated that services are products that require high involvement of consumers in the consumption process. In the interactions between buyer and seller or during the simultaneous processes of consumption and production, consumers identify distinct activities and dimensions associated with the service being evaluated. Consequently, the quality will be the result of an assessment process in which consumers contrast their expectations regarding the service in question with what was actually received. The prior experience in relation to a service influences clients' expectations. The judgment of service quality results from the perception of the service actually received.

The approach called American, led by Parasuraman et al. (1985, 1988), advocates that consumers' perception of service quality is determined by the difference between the expectation of the overall performance of the service and perception of the service actually rendered. They identified five important dimensions of service quality: tangibles, reliability, responsiveness, assurance and empathy (Du & Tang, 2014).

The SERVQUAL scale was developed by Parasuraman et al. (1985, 1988) with the aim of measuring the satisfaction of customers in relation to service quality. It is based on the five dimensions identified above, whose aspects are described by 22 items.

Cronin and Taylor (1992) criticized the measurement of service quality by the SERVQUAL scale because it assumes that service quality can be measured as the interval between consumers' expectations regarding the service and their perception with the service actually rendered, which means that quality should be measured only by the perception of the service received. In this respect, they developed the SERVPERF scale, which uses the same parameters as the SERVQUAL scale, including the dimensions, but omits the comparison of expectations and perceptions. Instead, it is centered only on the perception of the service quality, without considering expectations.

Cronin and Taylor (1992) argued that the SERVPERF model is more rational than the SERVQUAL, due to the following aspects: 1) it is hard to measure consumers' expectations before experiencing the service; 2) even if expectation could be measured, after receiving the service it would be biased; and 3) besides removing the distortions of measuring expectations, the SERVPERF approach also requires a smaller questionnaire, reducing the possibility of respondents feeling fatigued when filling it in. They also indicated that the SERVPERF scale has superior convergent and discriminant validity than the SERVQUAL scale, presenting better results regarding explaining the variance of total service quality.

In the area of education, service quality is one of the main priorities of teaching institutions. Despite the existence of positive aspects of the SERVPERF scale, in this study we used the HEdPERF scale, which was developed specifically to measure the quality perceived by college students (Abdullah, 2006).

Ali et al. (2006) employed the constituent dimensions of the HEdPERF scale, with the adaptations they considered necessary, to measure the education service quality as perceived by students at Malaysian public universities and to verify its effect on student satisfaction, corporate (or institutional) image and student loyalty.

Student satisfaction

Consumers are satisfied when the performance or experience of a product or service meets their expectations (Kotler & Clarke, 1987).

In the school setting, the short-term attitude resulting from students' evaluation of their educational experience has an impact on their satisfaction. This satisfaction occurs when the service meets or exceeds their expectations. Therefore, student satisfaction is molded continuously by the repeated experiences of university life (Elliot, 2002).

Besides enabling universities to increase their market share, students' satisfaction has a positive impact on their motivation and retention (Elliot, 2002).

The university needs to promote the students' involvement, defined as the time and physical and emotional effort they allocate to their educational activities. This contributes not only to better academic performance, but also to their satisfaction with the entire academic experience (Webber et al., 2013).

Since institutions of higher learning integrate the service sector, their administrators recognize that it is essential to meet the expectations and needs of their clients (Elliot, 2002). In this context, to be competitive and successful, universities need to identify the questions that are most important to their students, and deliver what they expect to receive (Elliot, 2002).

Just as in any consumer market, satisfaction results from the evaluation made after sale (enrollment), depending on the extent to which students' experience with the service meets their initial expectations (Cronin and Taylor, 1992).

The measurement of student satisfaction can be done based on factors related to the content taught, extracurricular aspects and other variables related to the school, such as location and installations, which influence student satisfaction (Kaldenberg et al., 1998).

Corporate image

The corporate image is the impression the organization makes in the minds of customers, which is built by the evaluation of multiple attributes related to the firm (Barich & Kotler, 1991).

The formation of the image is a process that involves concepts and feelings about the firm, reflecting fundamental recollections stored in consumers' minds (Igbal et al., 2017).

For an organization's image to be strong, it needs to have some differential that its consumers consider important. And in the educational context, student satisfaction has a direct impact on the teaching institution's image (Simões & Dibb, 2001). This satisfaction and the resulting image are influenced by tangible and intangible elements (Alves & Raposo, 2010).

According to Wang et al. (2015), both affective elements and cognitive assessments influence the construction of the corporate image of universities in students' minds. Academic reputation, physical appearance of the campus, cost, personal attention, location, distance from home, professional preparation, graduate program and career placement, among others, are elements that influence a school's image (Huddleston & Karr, 1982).

Student loyalty

Loyalty of consumers can be defined as the commitment to purchase a product or service again in the future, in consistent form, in preference over those offered by competitors, irrespective of the situational influences or the marketing effort of rivals.

Customer loyalty is the most valuable intangible asset of the modern company. Strong loyalty is not only a key for success in relation to competitors, it is fundamental for the firm's stability (Du & Tang, 2014).

Loyalty can be influenced by feelings of attachment and affection of customers with respect for a determined firm (Payne & Weber, 2006). According to Du and Tang (2011), it does not matter if loyalty is evaluated considering multiple dimensions or in overall form; what matters is that loyalty reflects behavioral characteristics, such as repeat buying, and emotional characteristics, such as affective connection of the customer with a product or service.

In the educational context, a direct relationship exists between student satisfaction and loyalty (Annamdevula & Bellamkonda, 2016; Duarte, Raposo & Alves, 2012; Alves & Raposo, 2009). In the ambit of education, loyalty is demonstrated when the student remains at the institution until graduation, returns for postgraduate study and/or recommends the school to other people (Swan & Oliver, 1989). This loyalty is particularly important for private teaching institutions interested in growth and higher profits (Reichheld & Teal, 2001).

The positive affective reactions of students increase their loyalty in various ways, in particular by the desire to repeat experiences that cause positive emotions (Skiner, 1953). In the business setting, positive feelings increase the chance that customers will make favorable comments to others about the service or product purchased (Swan & Oliver, 1989), as well as solidifying the intention to experience the service or buy the product again (Hennig-Thurau, Groth & Gremler, 2006). In the case of universities, satisfied and loyal students are good advocates by recommending the school to potential future students (Helgesen & Nesset, 2007).

Hypothesis development

Zameer et al. (2015) identified a significant positive relationship of service quality with corporate image and customer satisfaction in the service sector in Pakistan. The results indicated that be better the service quality, the more positive the corporate image will be in the minds of consumers.

The hypothetical model of this study was adapted from that developed by Ali et al. (2016) to investigate the impact of service quality of public universities in Malaysia on student satisfaction and loyalty and corporate image.

As carried out by Ali et al. (2016), here we use structural equation modeling, which enables the extraction of multiple insights from the results, because this tool, besides contemplating causal connections between latent variables, reveals the constructs that should be considered important based on their statistical significance.

To measure service quality, Ali et al. (2016) employed the HEdPERF scale developed originally by Abdullah (2006). He observed that the SERVQUAL and SERVPERF scales, designed as general measures of service quality, need to be modified (as mentioned previously) to fit specific areas of economic activity. Teaching institutions need to be concerned about how their students feel regarding the educational experience, as well as developing competencies and skills, in line with economic needs and values of society.

In this context, Abdullah (2006) developed a scale to measure service quality contemplating not only purely academic components, but other aspects of the overall setting where educational services are rendered and experienced by university students. The results of his study confirmed the existence of six dimensions necessary to measure the service quality of universities: non-academic aspects; academic aspects; reputation; access; program issues questions; and comprehension.

With the objective of not causing noise that could compromise the results, we did not consider the reputation dimension of the original HEdPERF scale, to avoid overlap of meanings and problems of multicollinearity with the corporate image construct. Ali et al. (2016) did not consider the comprehension construct, so we also did not include it in our hypothetical model.

Ali et al. (2016) discussed various studies postulating that the quality dimensions included in the HEdPERF model are determinants of student satisfaction, and thus are highly correlated with it. Therefore, similar to Ali et al. (2016), we considered the following hypotheses in our hypothetical model:

H1: Academic aspects have a statistically significant impact on the general satisfaction of students.

H2: Non-academic aspects have a statistically significant impact on the satisfaction of students.

H3: Access has a statistically significant impact on the satisfaction of students

H4: Program issues have a statistically significant impact on the satisfaction of students.

For customers to feel satisfied, they have to positively evaluate different dimensions of the quality of the service rendered. This evaluation occurs during the interaction between the consumer and service provider (Cronin & Taylor, 1992). The intensity of this satisfaction, in turn, influences the corporate image (Hu, Kandampully & Juwaheer, 2009; Nguyen & Le Blanc, 2002). In the university context, the influence of satisfaction on corporate image occurs directly, by raising the students' empathy in relation to the school, motivating them to disseminate a solid image among their friends and acquaintances (Helgesen & Nesset, 2007). This gives rise to the following hypothesis:

H5: Student satisfaction has a statistically significant impact on the university's image.

The influence of service quality on the loyalty of consumers can be both direct and indirect (Du & Tang, 2014). Service quality influences the behavioral intention of consumers, because their final action will be decided based on the quality of the service actually received. In parallel, the service quality will affect the propensity of consumers to recommend that service to other people. The recommendation intention is an important indicator of consumer loyalty (Parasuraman et al., 1985, 1988). According to Caruana (2000), the total quality of a service has a positive impact on loyalty, indirectly influencing it by means of satisfaction. When consumers feel satisfied with a service, that satisfaction positively influences their loyalty. In the hypothetical model of this study, service quality exerts an indirect impact on loyalty, through satisfaction. The main consequence of consumers' satisfaction is their loyalty to the brand, indicating their propensity to repeatedly use the services rendered by the same firm (Helgesen & Nesset, 2007). Hence, there is a significant positive influence of customers' satisfaction and their loyalty to the firm (Annamdevula & Bellamkonda, 2016; Duarte, Raposo & Alves, 2012; Alves & Raposo, 2009; Swan & Oliver, 1989). In the context of higher learning, this relationship also has also been shown to be positive and significant (Arif & Ilyas, 2013; Helgesen & Neset, 2007). Therefore, we formulated the following hypothesis:

H6: Students' satisfaction has a statistically significant impact on their loyalty.

The loyalty of students is affected by their satisfaction with the service received and the image they have of the teaching institution (Helsegen & Nesset, 2007; Alves & Raposo, 2010; Hu, Kandampully & Juwaheer, 2009; Ryu, Lee & Kim, 2008; Arpan, Raney & Zivnuska, 2003). Students' loyalty to the university is impacted by its image, so that the more positive the perception of the university is, the greater will be the impact on students' loyalty (Narteh, 2013; Aydin & Ozer, 2005), leading to the following hypothesis:

H7: Institutional image has a statistically significant impact on student loyalty.

3. Research Method

We conducted an exploratory study, although using a statistical tool that assesses causal connections between latent variables. The target population was the students of the night session of a private university located in the city of Rio de Janeiro, Brazil. The survey was conducted by applying structured self-administered questionnaires, of which 98 were completely answered.

Data collection

The questionnaire was composed of items scored on a Likert scale, with five response options ranging from totally disagree to totally agree. This instrument contained 31 items to measure the service quality. The constructs academic aspects and non-academic aspects were respectively estimated by nine and 11 items, while the latent variables program content and access were evaluated, respectively, by five and six items. All the items were developed based on the studies of Abdullah (2006) and Ali et al. (2016).

Student satisfaction was measured with five items, adapted from Ali et al. (2016), while student loyalty was measured with three items, adapted from Ali et al. (2016) and Helgesen and Nesset (2007), and image was measured using five items, adapted from Ali et al. (2016) and Narteh (2013). The data were collected in October 2018.

4. Results and Findings

We begin this section with the descriptive statistics and demographic information on the respondents. With respect to gender, 54% were women and 46% were men, while regarding age range, 6% were younger than 20 years old, 5% were between 21 and 25, another 5% were from 26 to 30, 27% were between 31 and 35, 17% were between 36 and 40, and 40% were older than 41 years.

Structural equation modeling

The data were submitted to partial least squares-based structural equation modeling (PLS-SEM), using the WarpPLS software (version 6.0). First we evaluated the measurement model, followed by the structural model and the fit model, by calculating the R^2 value (Hair et al., 2014).

Measurement model

Before analyzing the measurement model, it is important to verify the internal reliability and convergent validity of the constructs. The internal reliability was evaluated by the indicators Cronbach's alpha, to verify if the sample had biases and whether the indicators had the capacity to generate reliable results. With respect to Cronbach's alpha, values higher than 0.70 are considered sufficient (Hair et al., 2014).

The convergent validity of the constructs was checked by calculating the average variance extracted (AVE). AVE values greater than 0.50 are considered adequate, by demonstrating that on average the construct explains more than half of the variance of

its indicators (Hair et al., 2014).

Table 1 – Constructs, items, average variance extracted (AVE), and Cronbach's alpha

Construct	Number of items	AVE	Cronbach's alpha
Academic Aspects (AA)	9	0.511	0.879
Non-Academic Aspects (NA)	11	0.595	0.930
Access (A)	6	0.506	0.795
Program Issues (P)	5	0.505	0.747
Student Satisfaction (SS)	5	0.780	0.929
Image (I)	5	0.504	0.733
Student Loyalty (SL)	3	0.847	0.909

Source: Authors, based on data

The AVE of all the constructs was greater than 0.50, while Cronbach's alpha was higher than 0.70 (Table 1).

Table 2 – Factor Loading Estimates

Construct	Indicator	Loading
	AA1	0.693
	AA2	0.667
	AA3	0.753
	AA4	0.708
	AA5	0.760
	AA6	0.603
	AA7	0.776
	AA8	0.746
Academic Aspects	AA9	0.712
	NA1	0.763
	NA2	0.869
	NA3	0.826
	NA4	0.644
	NA5	0.717
	NA6	0.831
	NA7	0.882
	NA8	0.838
	NA9	0.765
	NA10	0.712
Non-Academic Aspects	NA11	0.576
	A1	0.804
	A2	0.687
	A3	0.766
	A4	0.786
	A5	0.426
Access	A6	0.729
	PI1	0.828
	PI2	0.525
	PI3	0.771
Program Issues	PI4	0.723

|	PI5	0.666
	I1	0.499
	I2	0.816
	I3	0.829
	I4	0.846
Image	I5	0.451
	SS1	0.928
	SS2	0.900
	SS3	0.911
	SS4	0.822
Student Satisfaction	SS5	0.849
	SL1	0.921
	SL2	0.940
Student Loyalty	SL3	0.899

Source: Authors, based on data

High loadings of a construct indicate that the corresponding indicators have a lot in common, which is denoted by the construct. In this study, the loadings were appropriate.

Structural model

In PLS-SEM, the hypothetical model is fitted to the sample data to achieve the best parameter estimates by maximizing the explained variance of the endogenous latent variables (Hair et al., 2014).

The hypotheses of the hypothetical model were tested and the results are depicted in Figure 1.

Figure 1: PLS path model diagram and hypothetical model outcomes
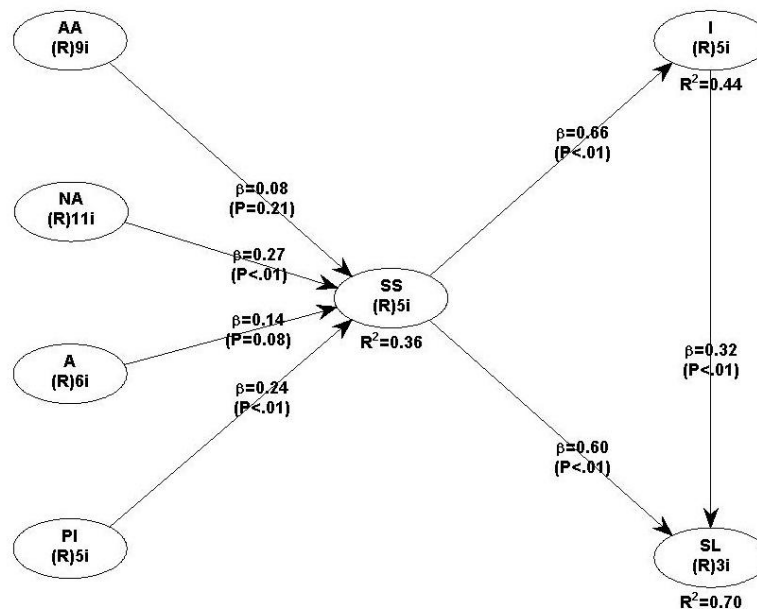
Source: Authors, based on data

The structural model's path coefficients (β) refer to the values of the exogenous variables of the model. It should be noted that the latent variable student satisfaction

(SS) is endogenous with respect to the service quality dimensions, but is also endogenous regarding the latent variables image (I) and student loyalty (SL). Each path coefficient is accompanied by the respective statistical significance. The coefficient of determination (R^2) is used to assess the structural model, constituting a measure of predictive precision. This coefficient is the squared correlation between the actual and predicted values of a determined endogenous latent variable. In other words, because it is the squared correlation between actual and predicted values, the determination coefficient corresponds to the amount of variance in the endogenous latent variable which is explained by all exogenous latent variables that influence it.

The results strongly confirmed five of our hypotheses - H2, H4, H5, H6 and H7 – as explained below.

The quality dimension non-academic aspects (NA), whose path coefficient is β = 0.27, is statistically significant (p< 0.01) and has a positive impact on student satisfaction (SS). Therefore, hypothesis H2 should be accepted.

The quality dimension program issues (PI) has path coefficient of β = 0.24, statistical significance (p< 0.01), and has a positive impact on student satisfaction (SS). Hence, hypothesis H4 should be accepted.

The student satisfaction construct (SS), whose path coefficient is β = 0.66, with statistical significance (p< 0.01), exerts a positive effect on the school's corporate image (I) construct. Therefore, hypothesis H5 should be accepted.

The student satisfaction construct (SS), whose path coefficient is β = 0.60, with statistical significance (p< 0.01), has a direct positive impact on student loyalty. In reality, the student satisfaction (SS) construct directly and indirectly affects student loyalty (SL), with the indirect impact being through the latent variable corporate image (I).

The corporate image construct (I), with path coefficient of β = 0.32 and statistical significance (p< 0.01), has a positive impact on the student loyalty construct (SL). Therefore, hypothesis H7 should be accepted.

Hypotheses H1 and H3 were rejected. In the case of H1, which assumes a direct and positive impact of academic aspects (AA) on the student satisfaction construct (SS), the path coefficient, β = 0.08, is not statistically significant (p = 0.21), as is necessary. This result is highly relevant and allows gaining important insights, which will be examined in detail in the conclusion section.

Analogously, H3 was rejected, which establishes the existence of a positive impact of access (A) on student satisfaction (SS), since the path coefficient, β = 0.14, is not statistically significant.

The R^2 values of the latent endogenous variables student satisfaction (SS), corporate image (I) and student loyalty (SL) are appropriate. Together, they explain 70% of the variance of the endogenous construct student loyalty ($R^2 = 0.70$).

5. Conclusions

This study fills a gap in the literature on higher learning in Brazil, since we did not identify in the literature examined any quantitative study using the HEdPERF scale to assess the impact of teaching quality on student satisfaction, institutional image and student loyalty.

The results show that among the sample analyzed, student satisfaction affected corporate image and student loyalty, in the last case both directly and indirectly. However not all the service quality dimensions influenced student satisfaction. Although the main results are convergent with those reported by Ali et al. (2016), the basis for this study, there were some relevant divergences that deserve comment.

These discrepancies can reveal differences in the main objective of students of public universities in Malaysia and the interest of students of a Brazilian private university enrolled in the night session. Unlike the Malaysian students surveyed, those in Brazil in our sample did not attribute significant relevance to the academic aspects (AA), which include quality of the faculty. This can be explained because the professor is considered to be the main barrier to the most important goal of students taking night classes at the targeted private Brazilian university, which is to obtain a diploma.

The variables observed as having the greatest importance on the constructs non-academic aspects and program issues were, respectively, quality of service and program content flexibility.

This result suggests a certain erosion of the quality of teaching in private Brazilian universities, notably in institutions whose main aim is to maximize profits rather than teaching quality. The teacher, in contexts analogous to those studied by us, does not tend to be perceived as someone who can instill knowledge and excellence in the student, but rather as someone who can assign a failing grade at the end of the semester.

Although the idea of rendering adequate services in all dimensions appears to be the best option in the majority of cases, the marketing professionals and managers of private universities should prioritize these two aspects to obtain the best financial results. Nevertheless, they should not ignore the fact that the absence of statistical significance of the other quality dimensions reveals the shortfalls of the teaching process in these universities as a category. At the same time, those responsible for the quality of teaching should consider the importance of the academic aspects on the personal development of students even if this does not maximize profits.

In fact, the process of globalization, which has served as the backdrop for the authorization for large private universities in Brazil, especially those controlled by families, to float shares in the market, may have irremediably altered the focus from quality to profits. In short, the shareholders are becoming more important than the students.

In light of this situation, this work contributes to the discussion within the current Brazilian government regarding the direction to be given to public policies on education, notably those aimed at primary schooling. The reason for this focus is that at this stage of education, besides the content of the curriculum, basic values are instilled that will stay with citizens for the rest of their lives.

In principle, the true objective of college studies should be to obtain the best possible qualifications to enable students to perform their professional duties competently, and exercise their role as good citizens with awareness and maturity.

Only seeking a diploma, without paying heed to the academic excellence of teachers, points to a deformity constructed in the initial educational stages.

Although this study sheds light on the situation of university teaching in Brazil, its limitations should be mentioned, to reveal avenues for new research. Above all, this study was conducted in only one campus of a Brazilian private university in Rio de Janeiro, among students attending night classes. Because we used a convenience sample, the results cannot be generalized to the population of all students of private universities in Brazil. We therefore suggest conducting surveys of random samples of students from private Brazilian universities located in various states and cities, with sufficient size to apply covariance-based structural equation modeling, a tool that enables testing hypotheses and theories more comprehensively than the PLS-SEM used here. The results might corroborate or contradict our findings, providing new insights.

We also recommend that the hypothetical model of this study be applied to public universities, whose objective is not to obtain profit, but supposedly to offer high-quality teaching. It would be interesting to compare results from public and private universities to obtain a more complete picture of university teaching in Brazil. This would help educational decision-makers to select procedures and adopt actions to improve university teaching in the country.

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